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PROGRAM MANAGER
RMA CONTAMINATION CLEANUP

U.S. ARMY
MATERIEL COMMAND

— COMMITTED TO PROTECTION OF THE ENVIRONMENT —

AD-A277 561

Offpost Operable Unit
Remedial Investigation and Chemical
Specific Applicable or Relevant and
Appropriate Requirements
Final Report
(Version 3.1)
Volume III

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Environmental Science And Engineering, Inc.

Harding Lawson Associates

Applied Environmental, Inc.

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LITIGATION TECHNICAL SUPPORT AND SERVICES

Rocky Mountain Arsenal

Offpost Operable Unit
Remedial Investigation and Chemical
Specific Applicable or Relevant and
Appropriate Requirements
Final Report
(Version 3.1)
Volume III

December 1988

Contract Number DAAK11-84-D-0016
Task Number 39

Prepared by

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.
HARDING LAWSON AND ASSOCIATES

Prepared for

U.S. ARMY PROGRAM MANAGER'S OFFICE FOR
ROCKY MOUNTAIN ARSENAL

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APPENDIX E
GEOLOGIC AND HYDROGEOLOGIC PRODUCTS

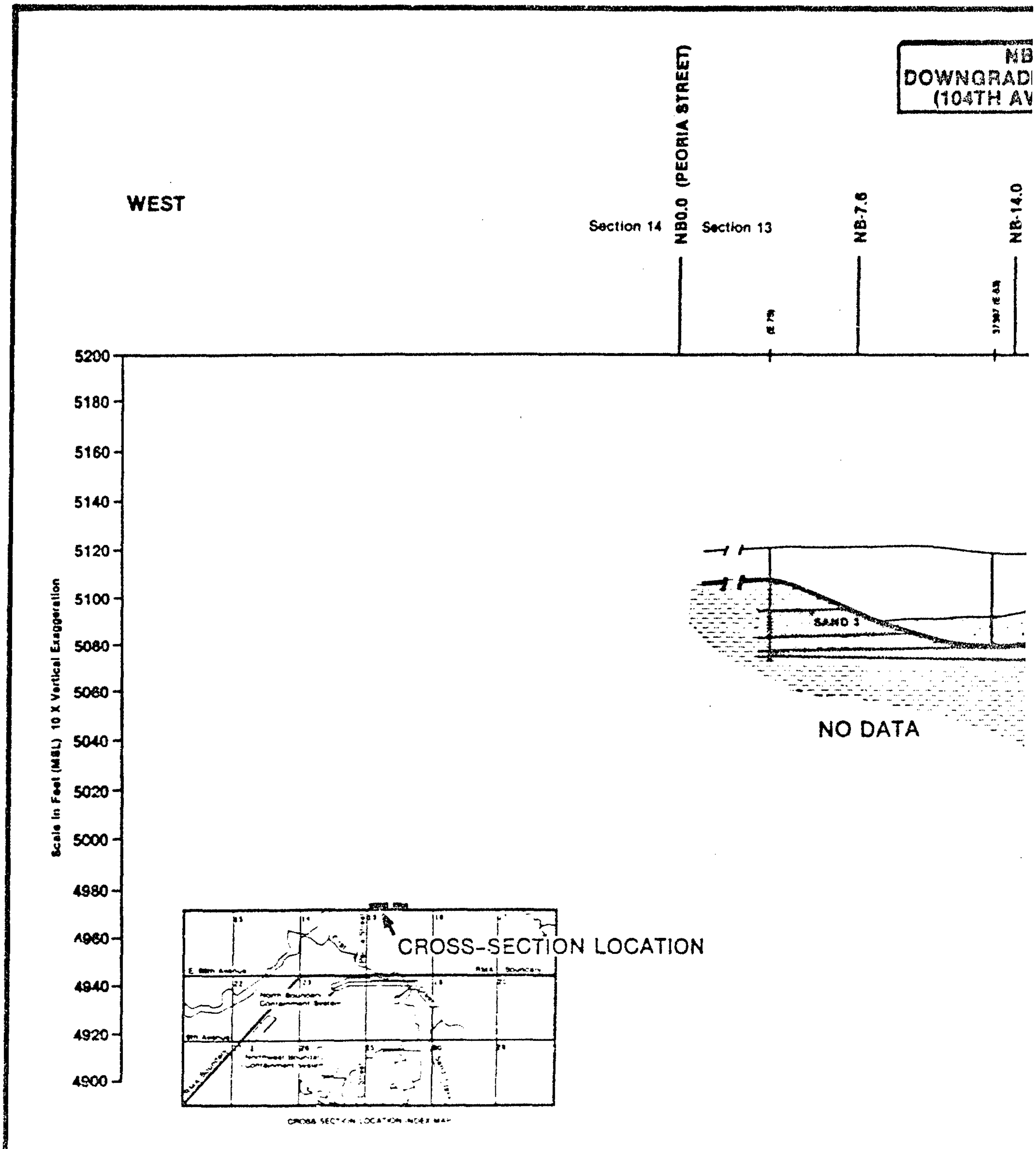
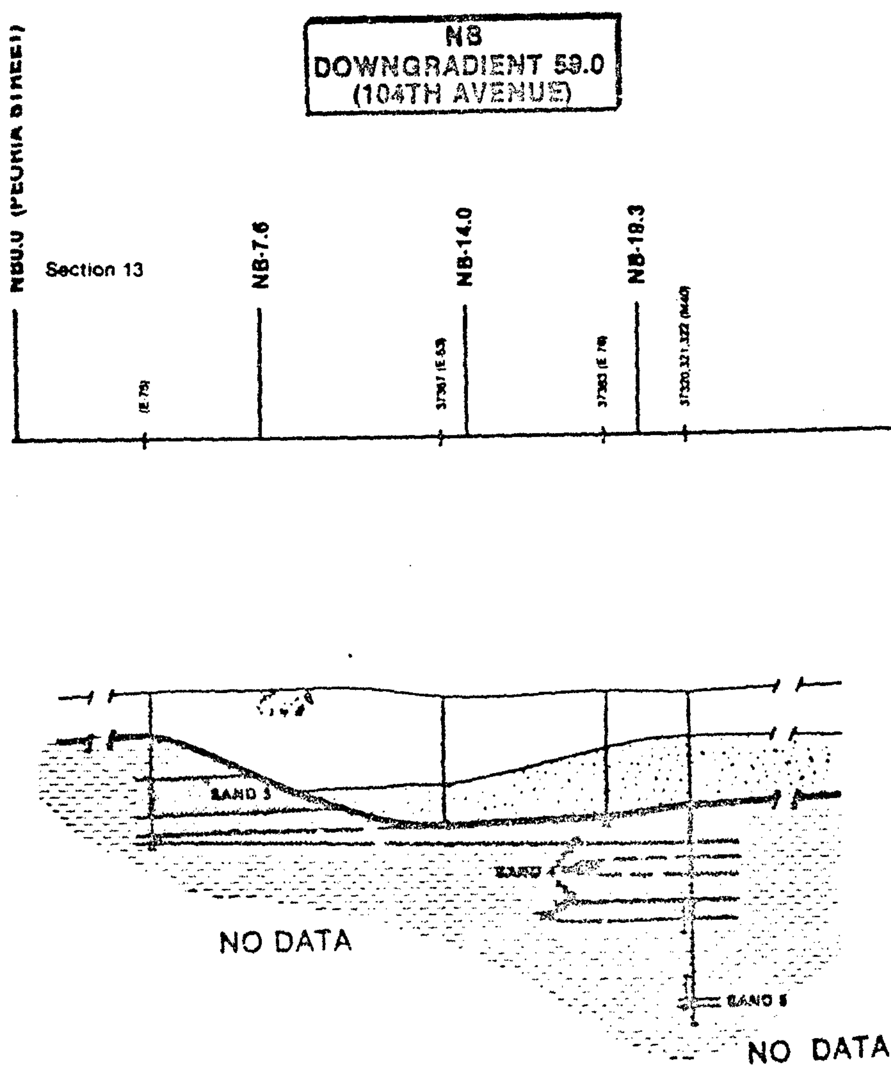


Figure E-1

EAST-WEST GEOLOGIC CROSS-SECTION NB DOWNGRADIENT 59.0 (104th. Ave.)

SOURCE: ESE, 1988



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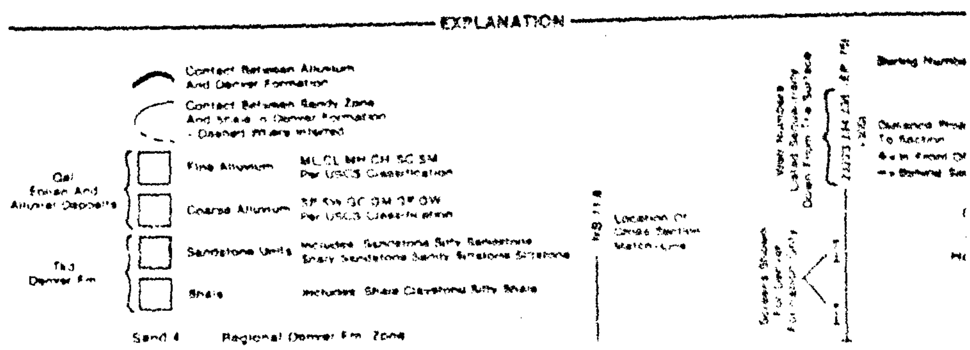

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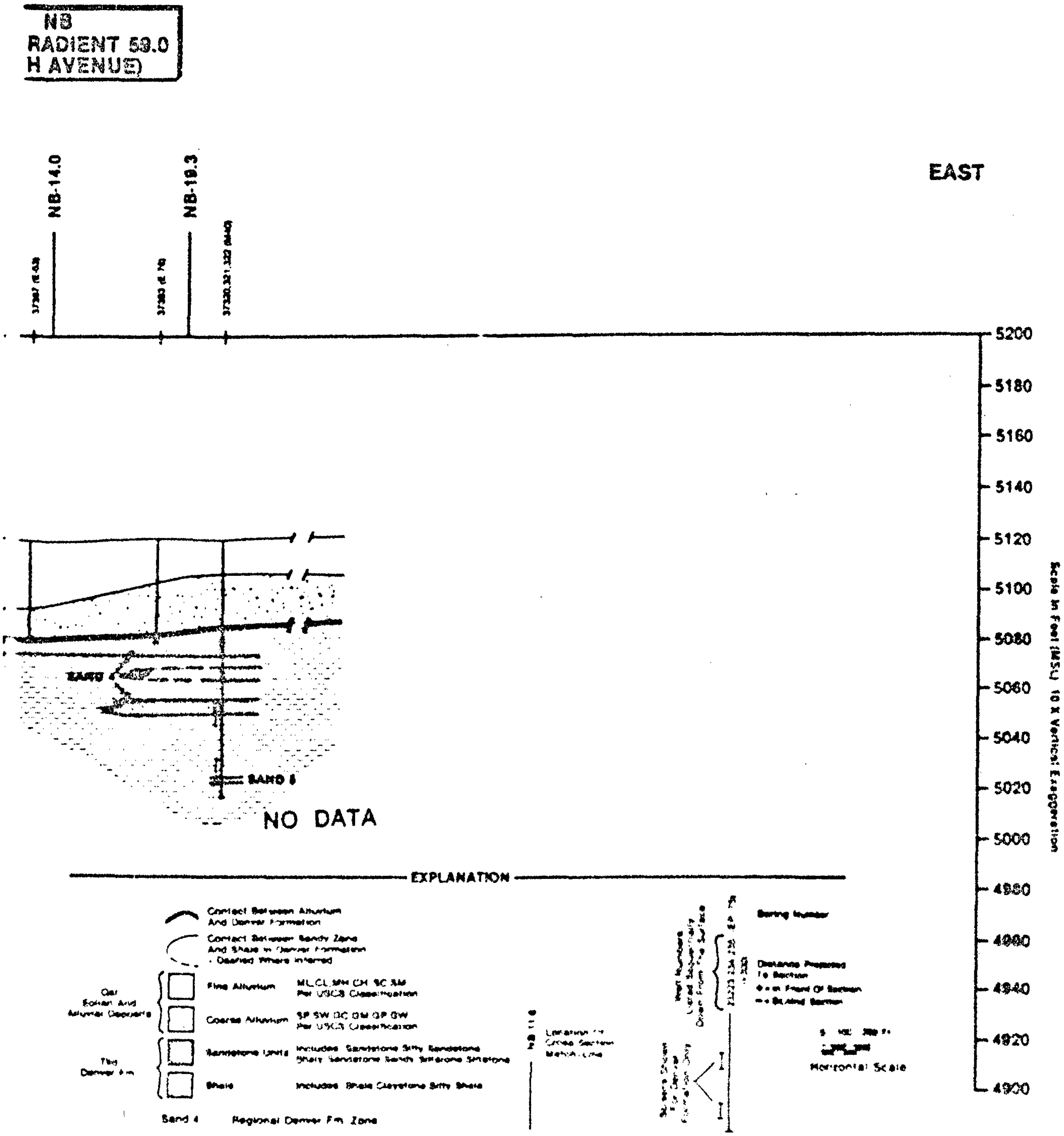
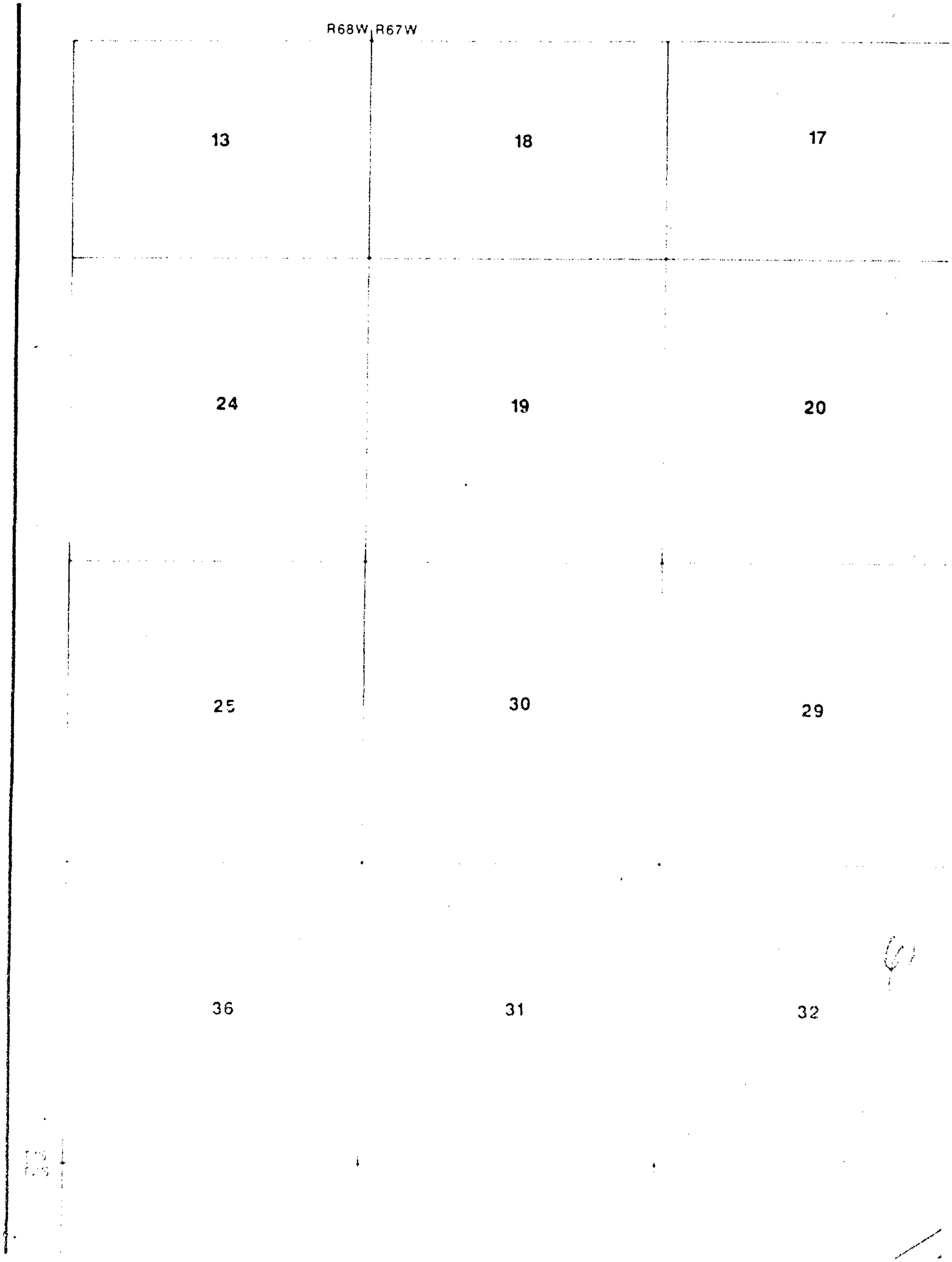


Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland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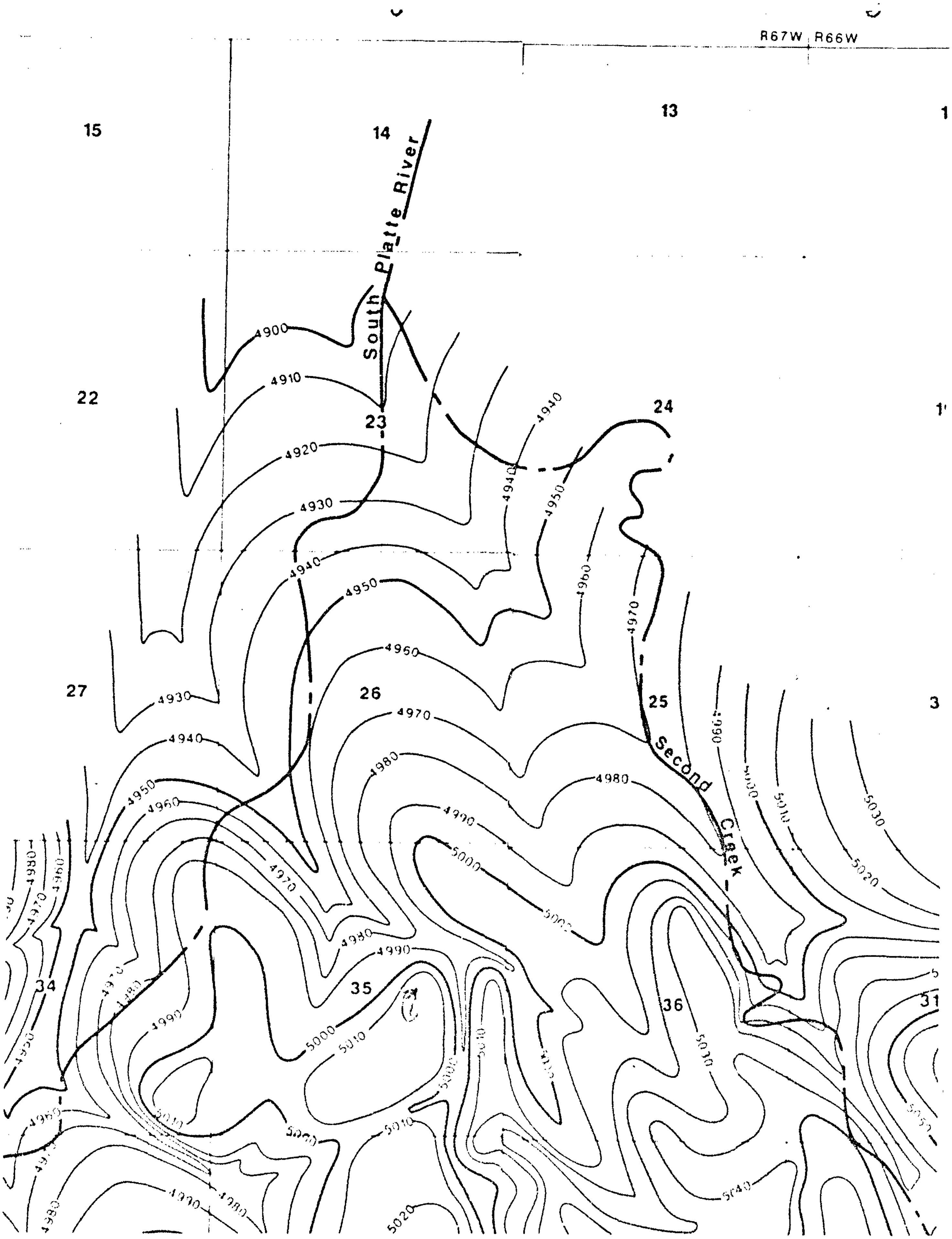
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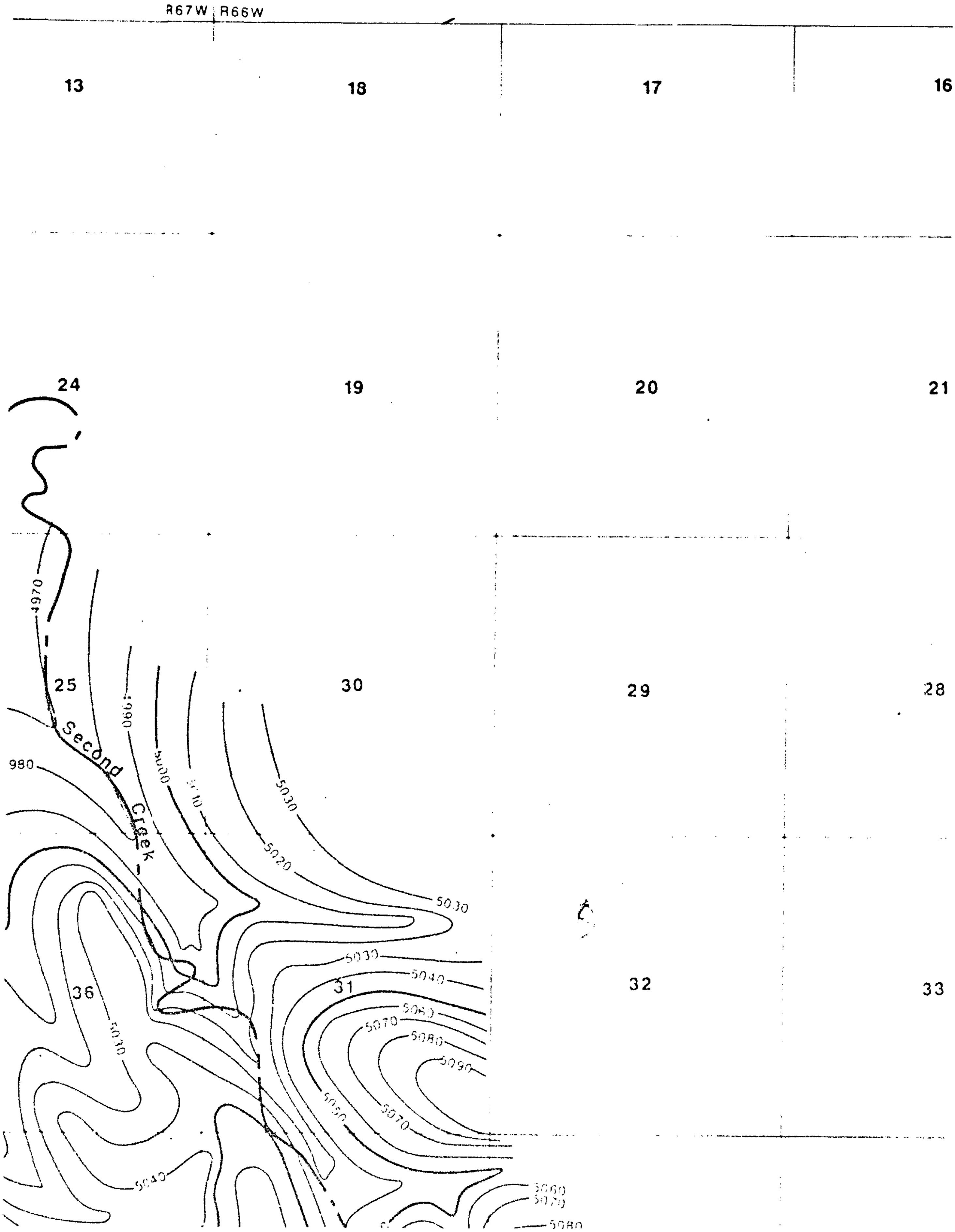
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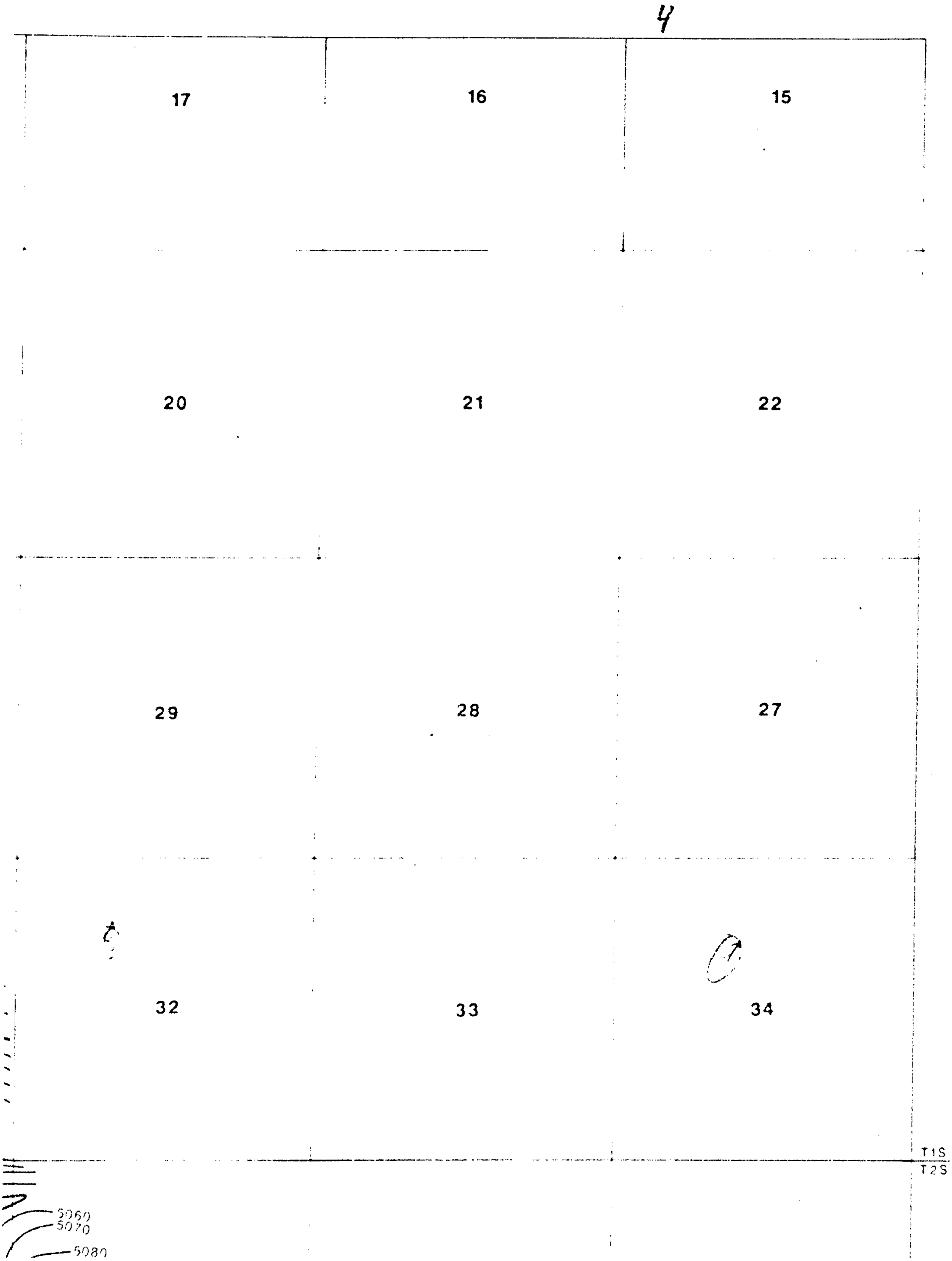
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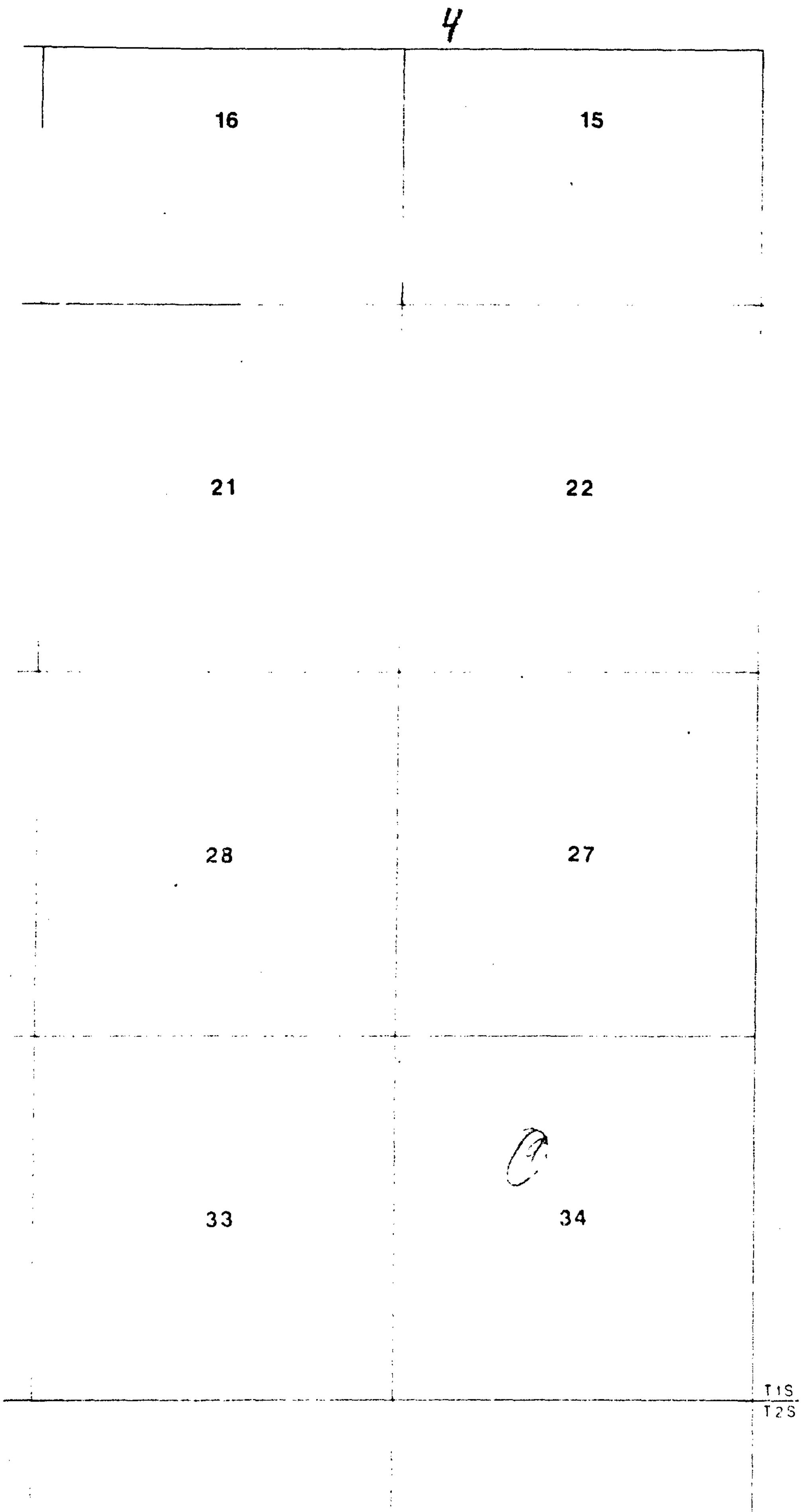

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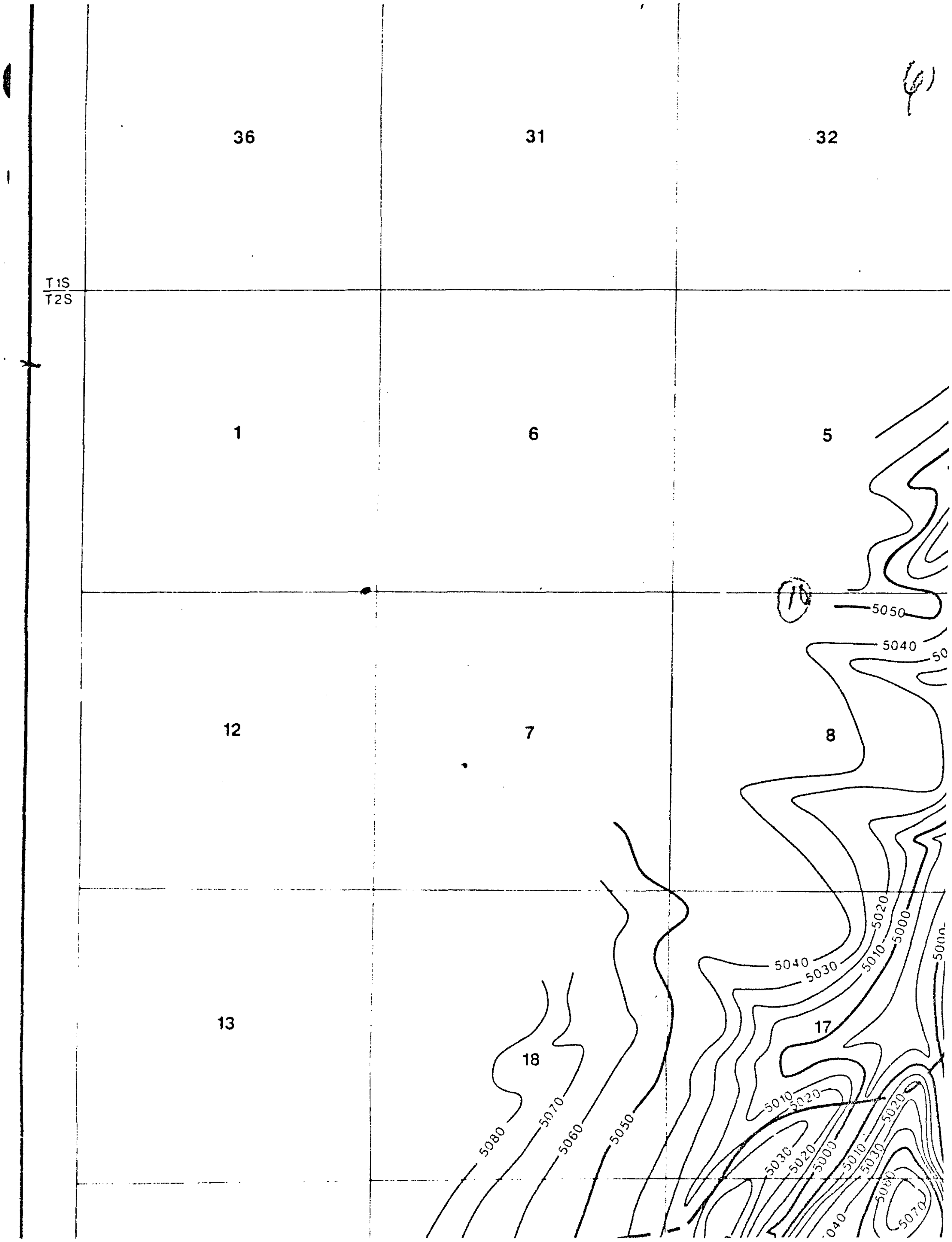
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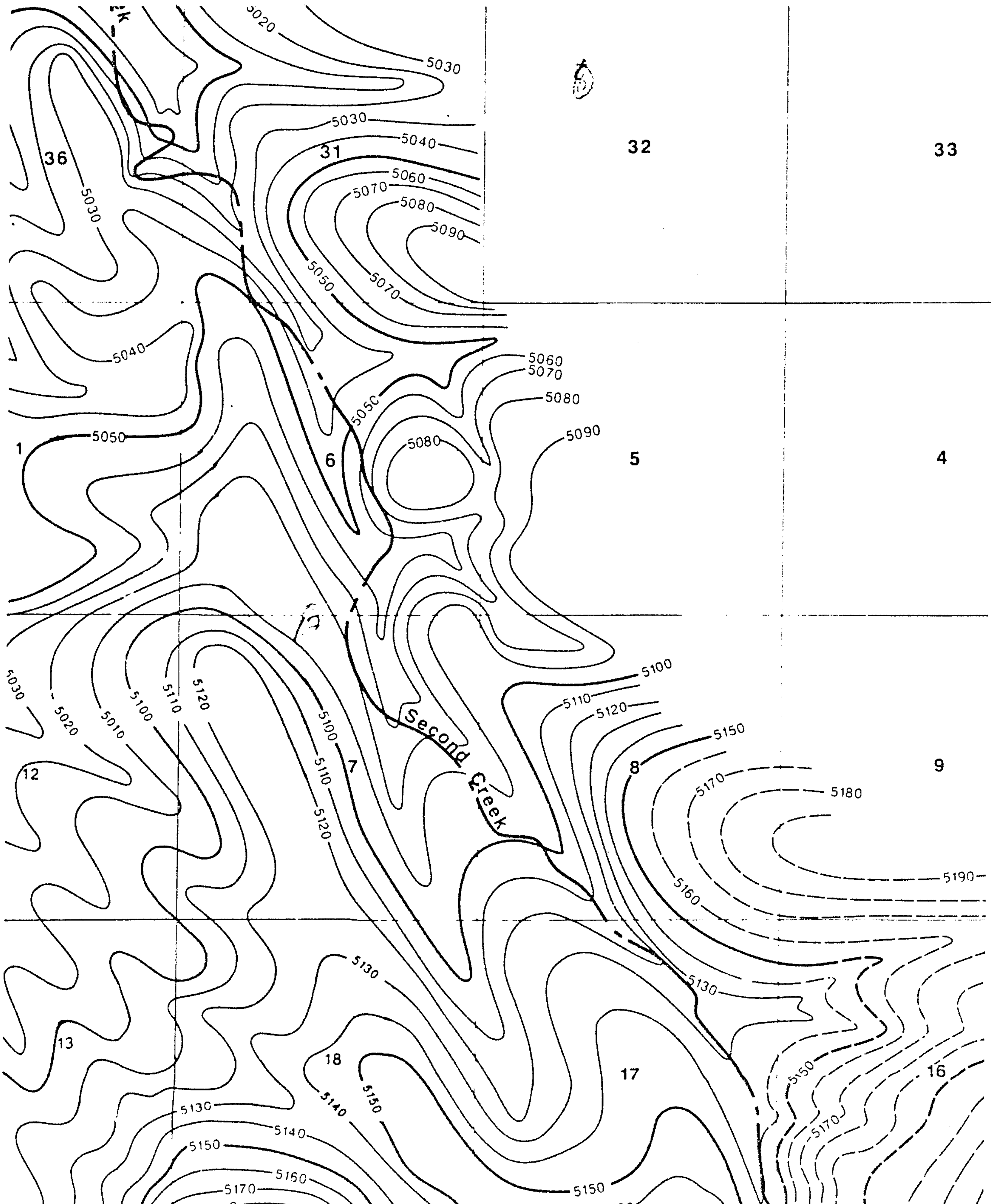

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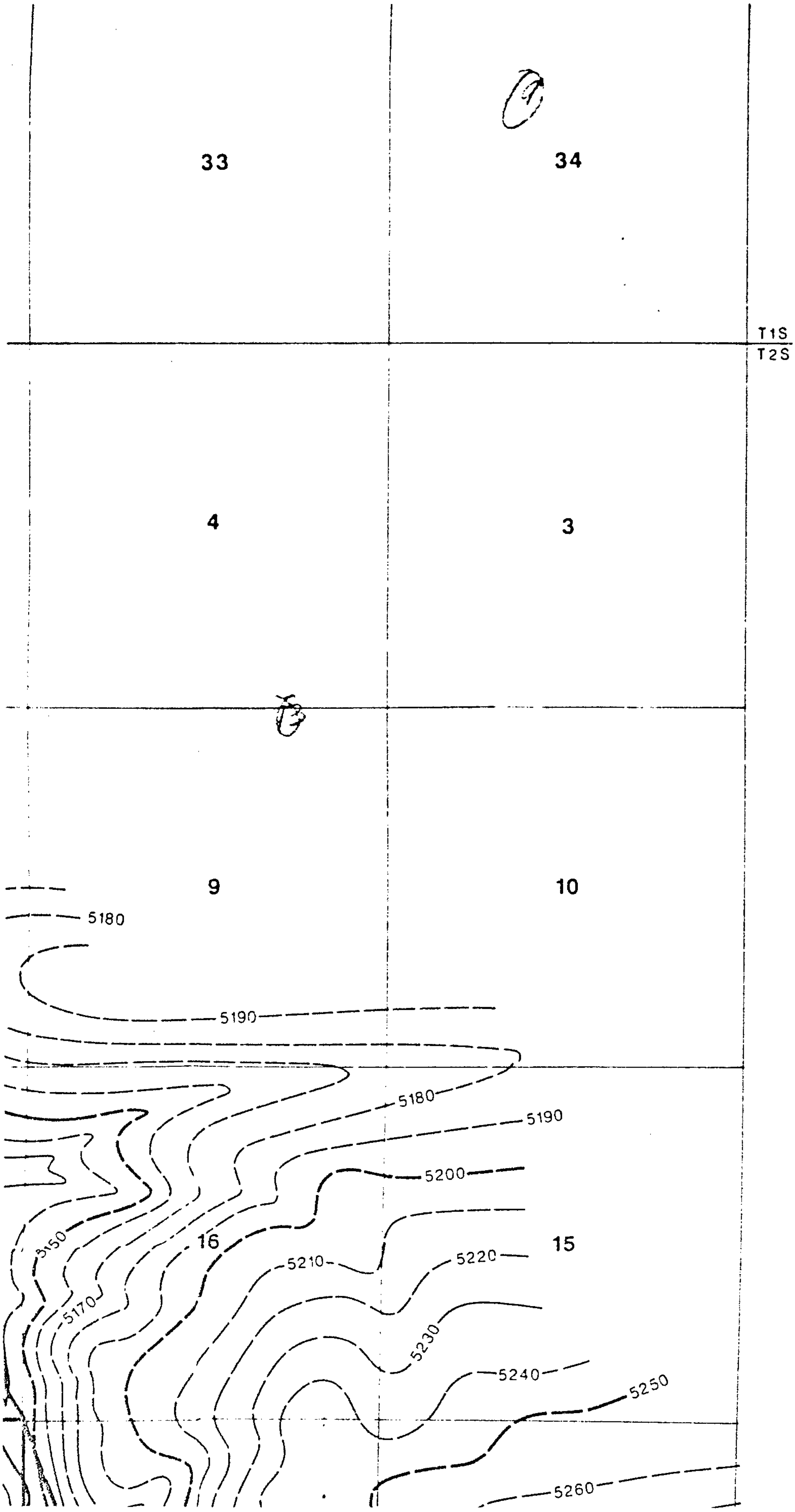
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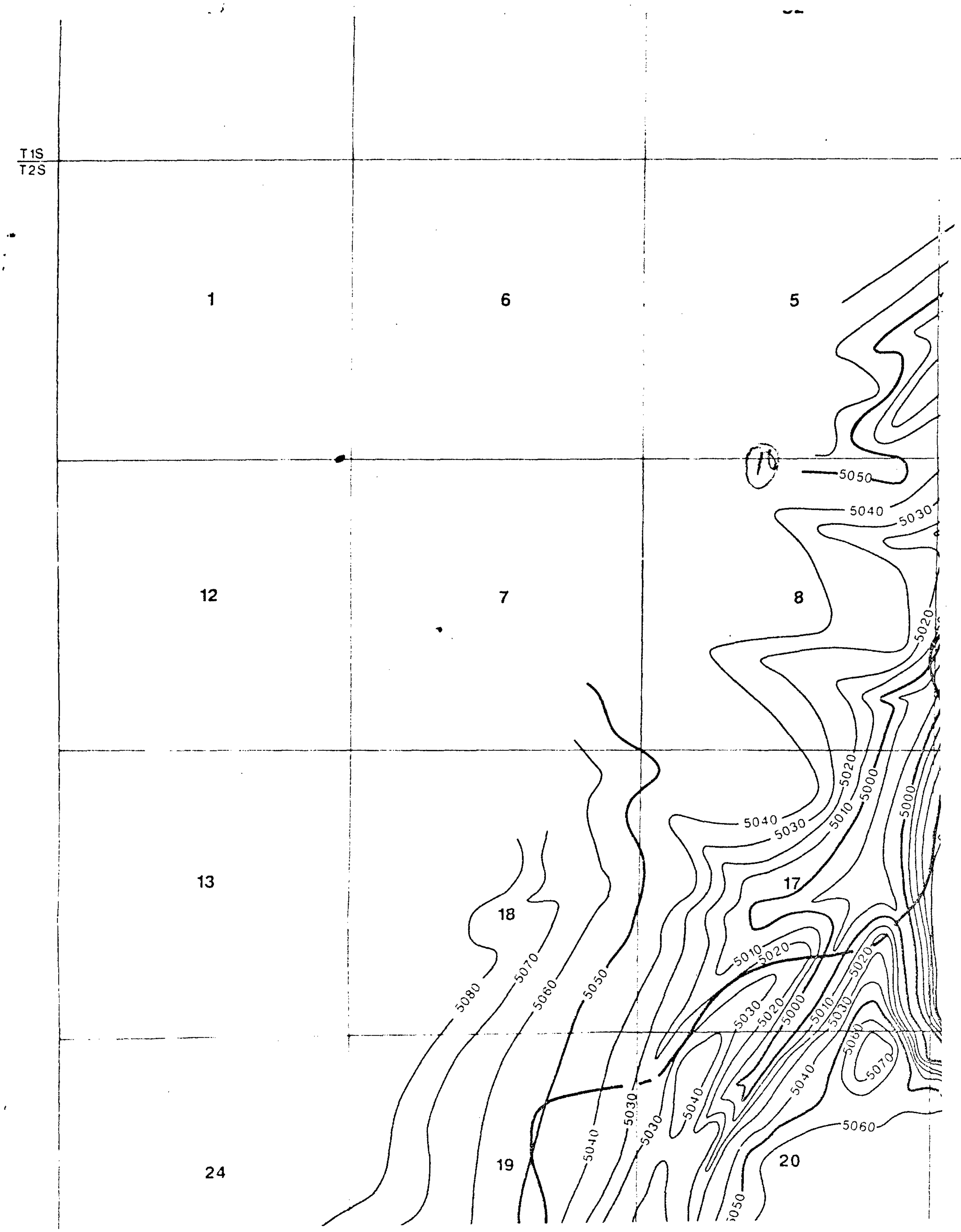

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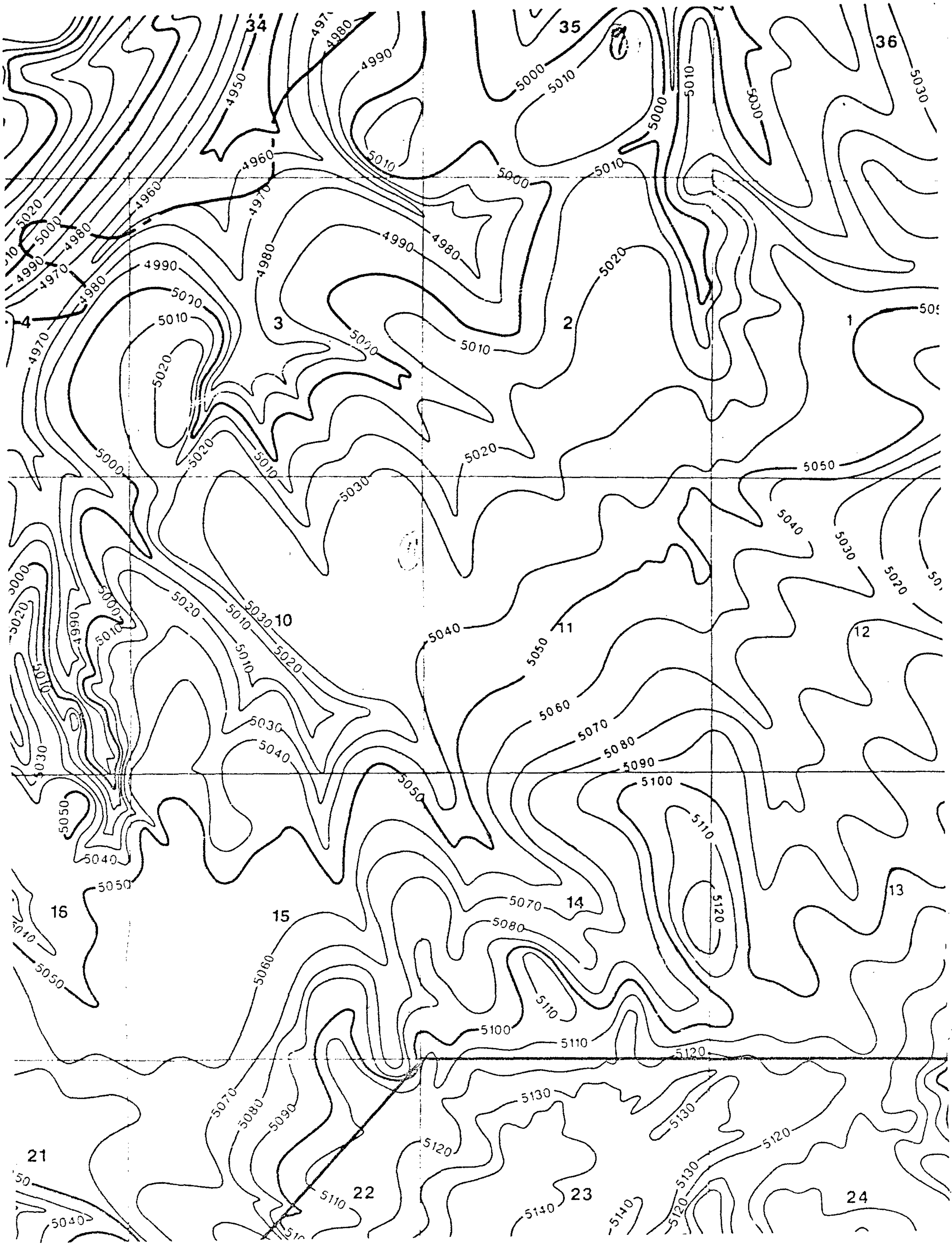

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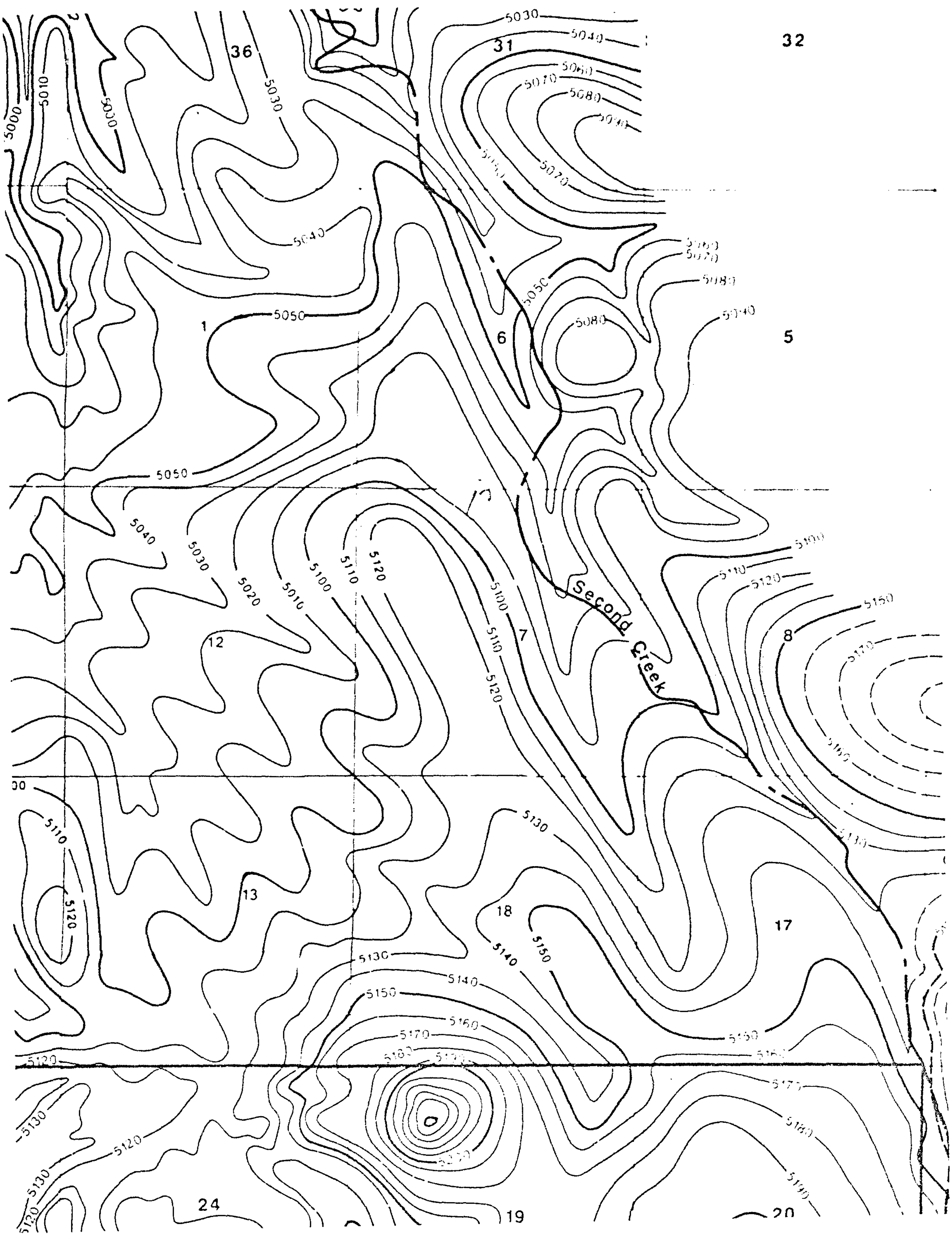

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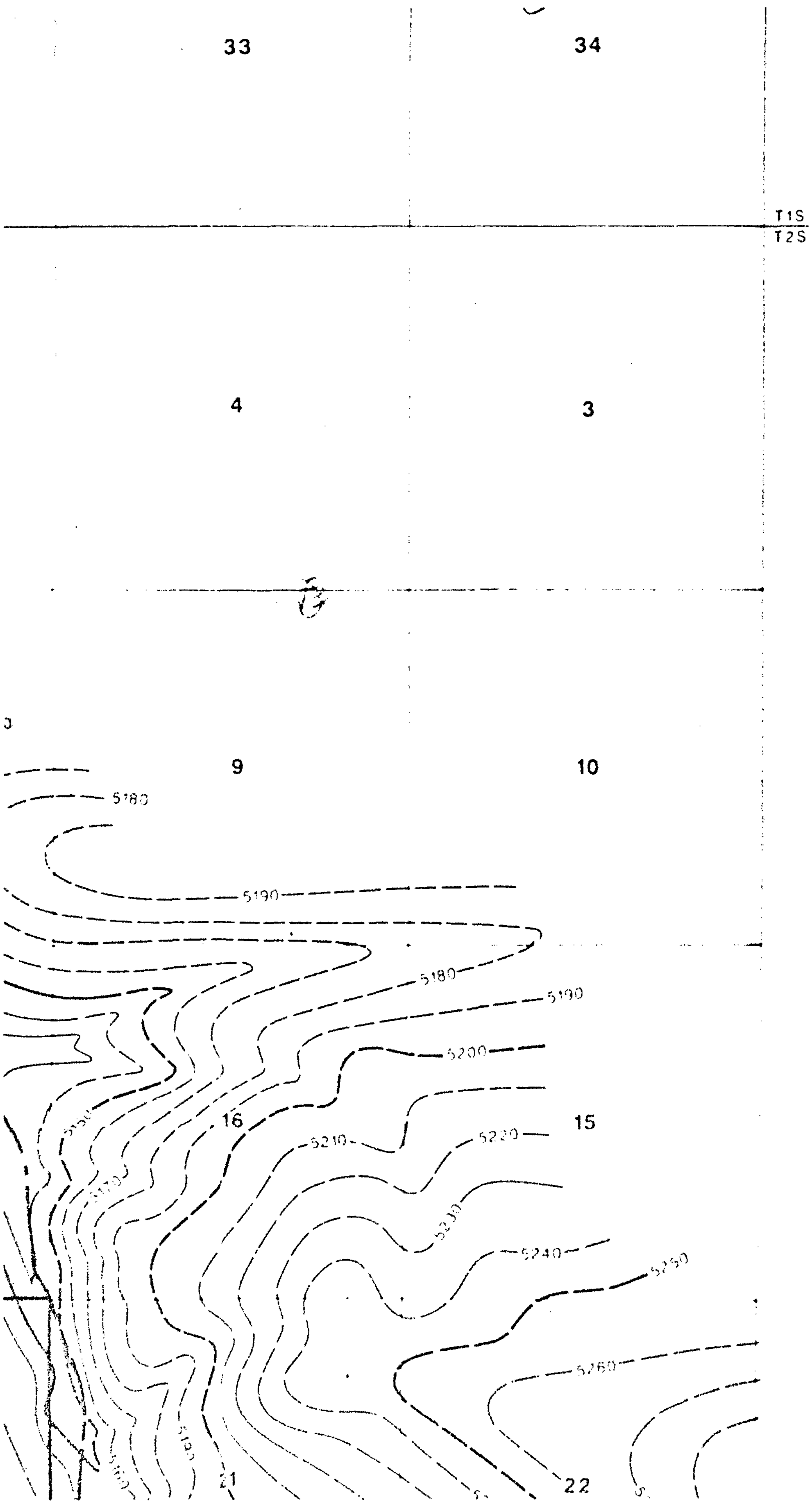

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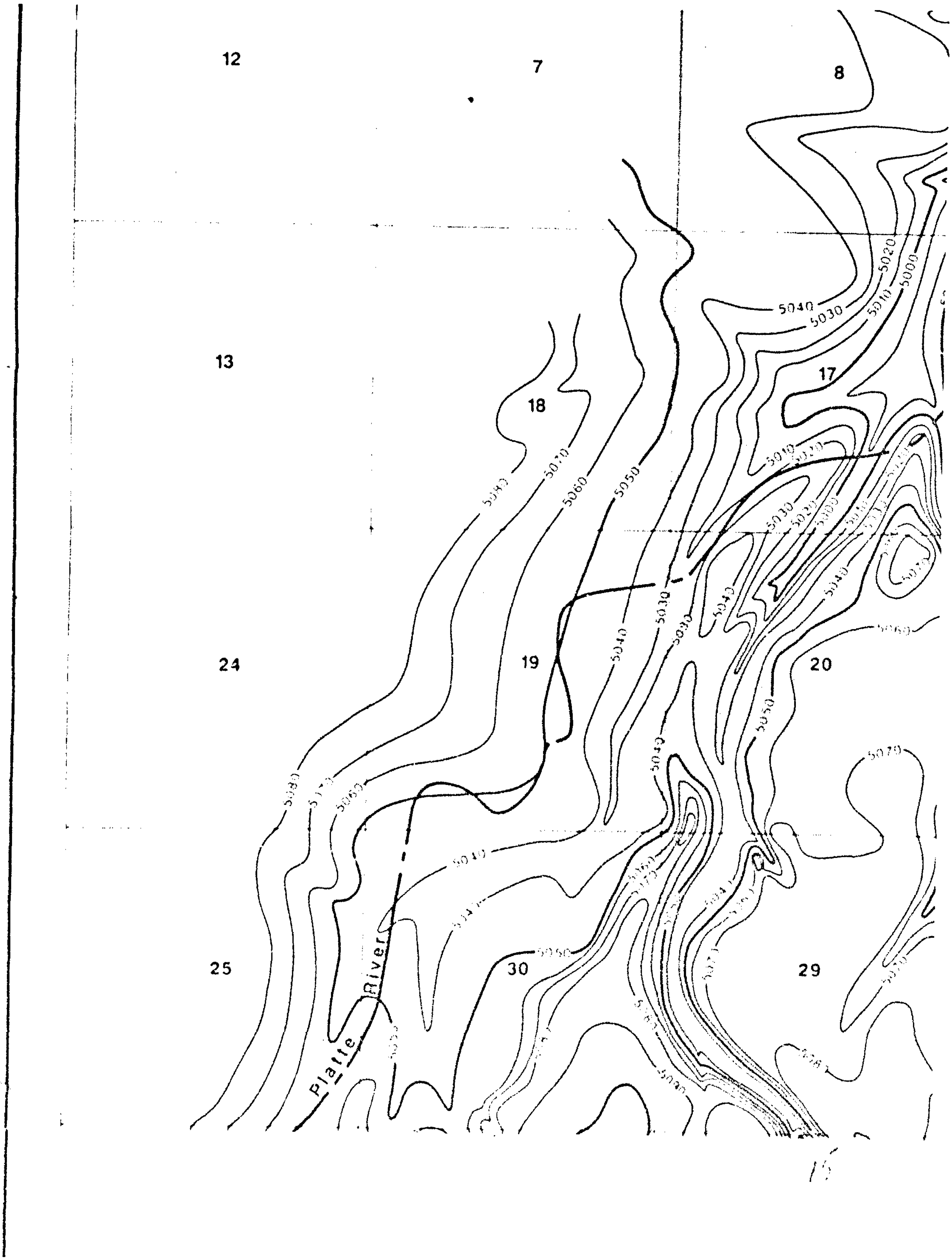
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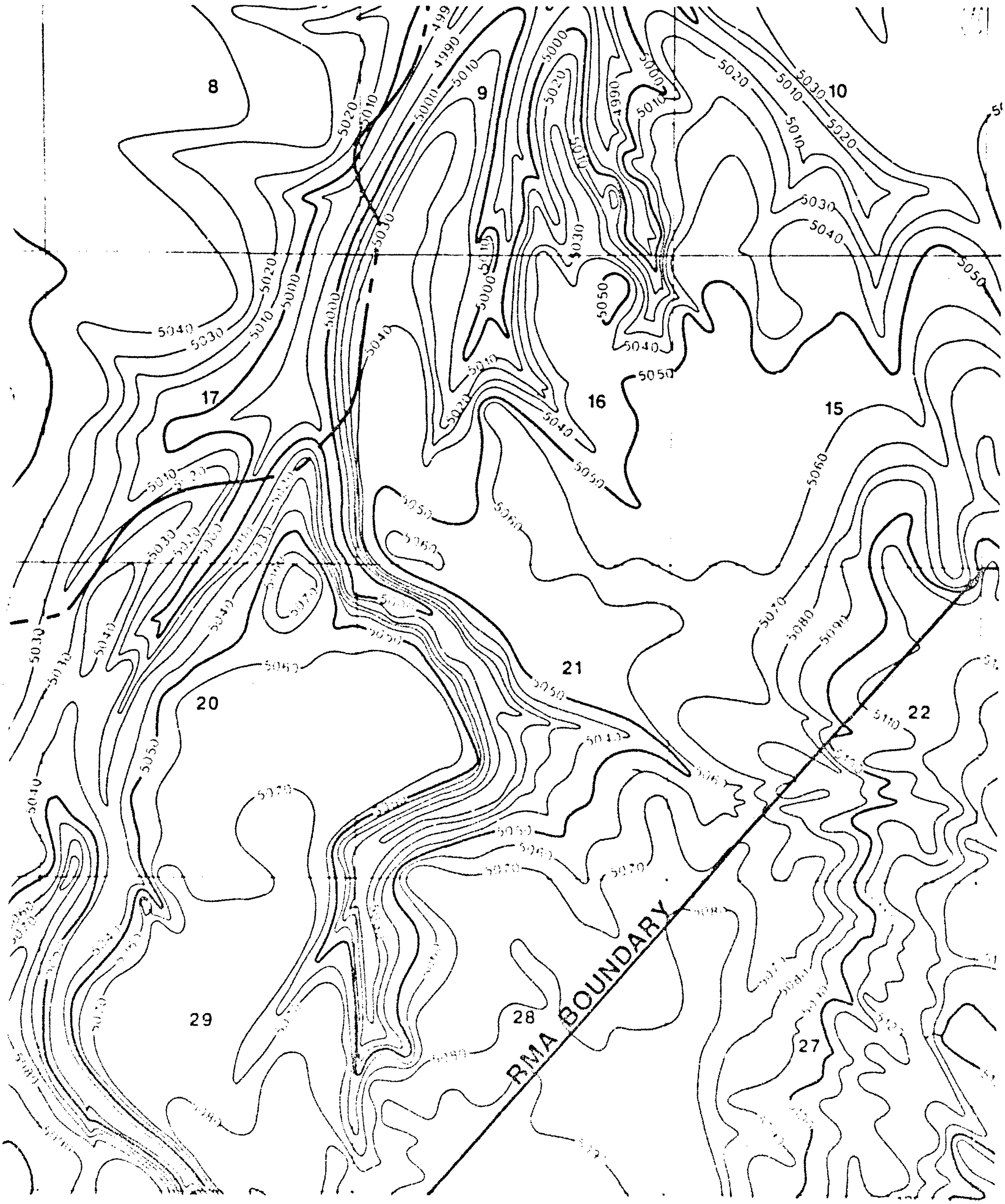

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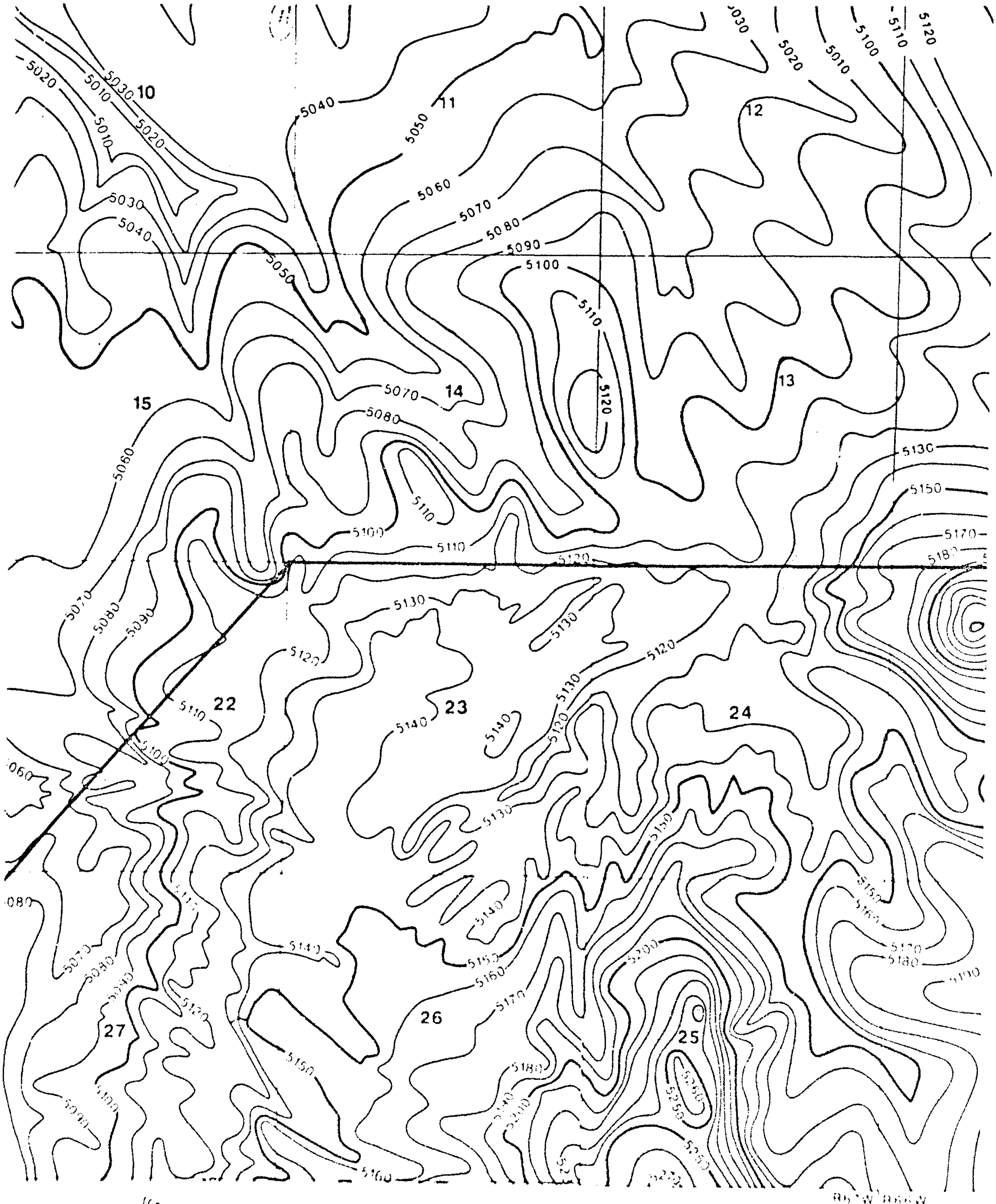
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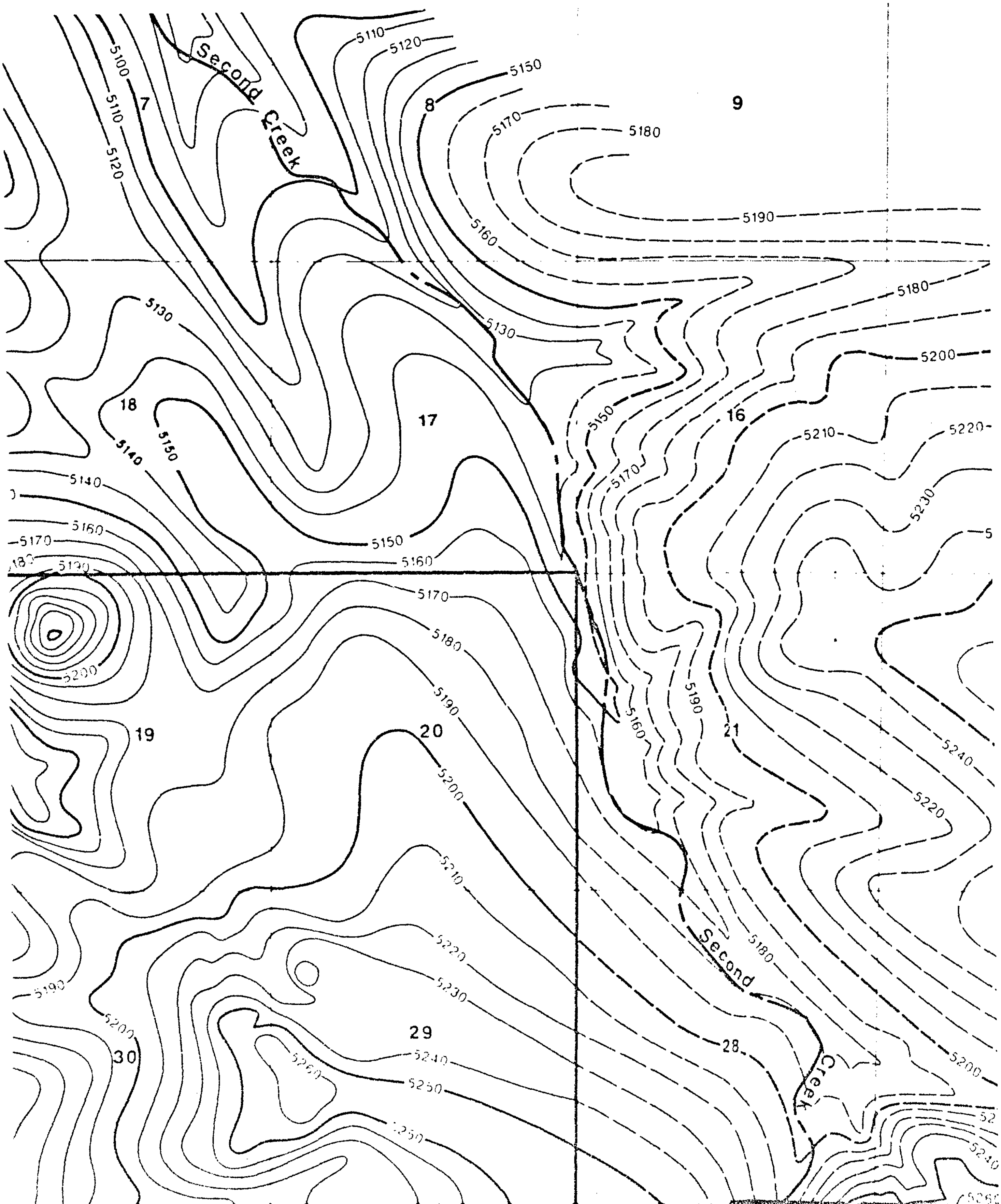

Figure E-2.
BEDROCK ELEVATION M

SOURCE ESE, 1988

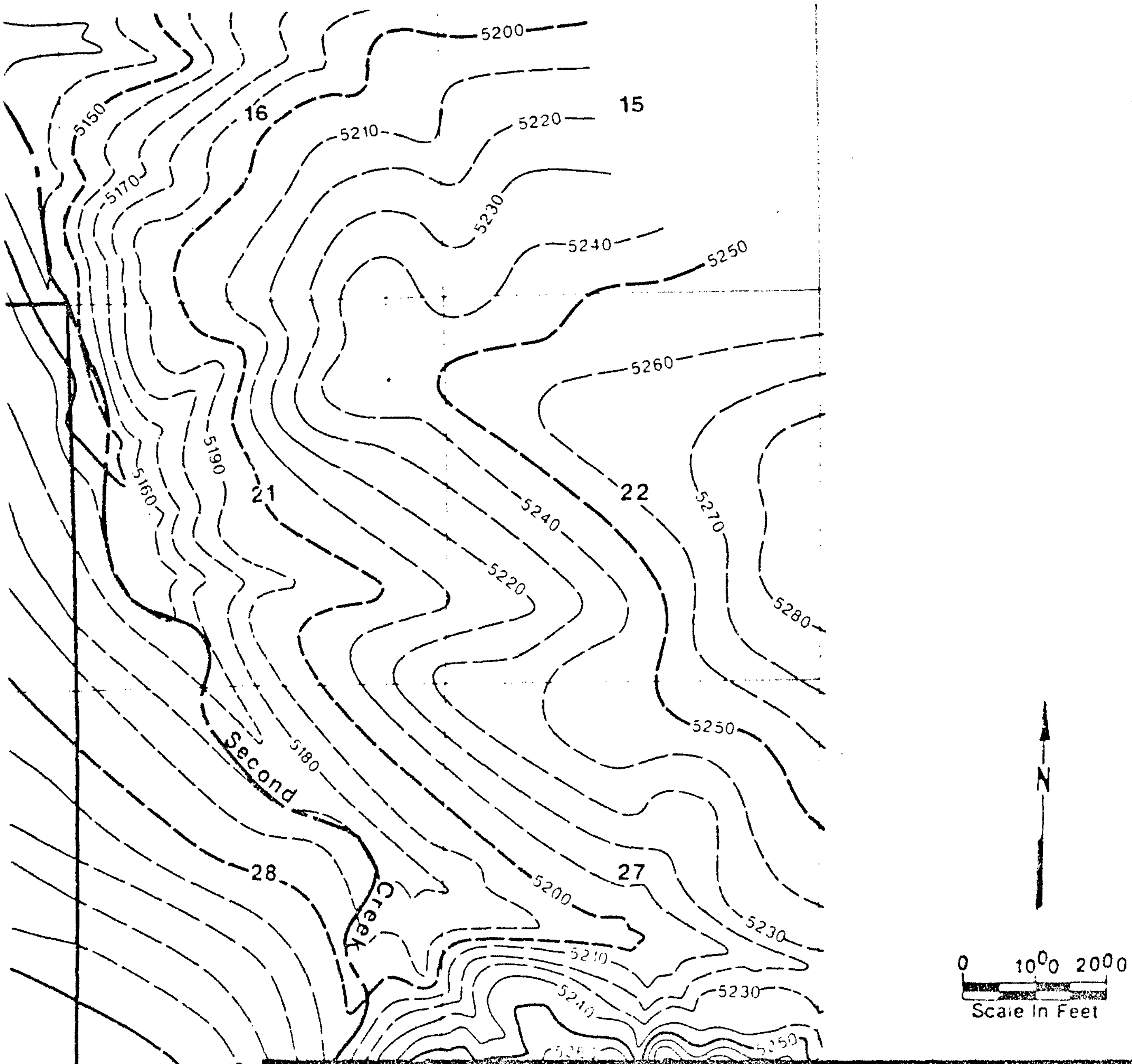

Figure E-2

BEDROCK ELEVATION MAP

SOURCE ESE 1988

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AN RPH COMPANY

DRAWN/REVISED BY CHK'D DATE

APPROVED FOR ISSUE BY DATE

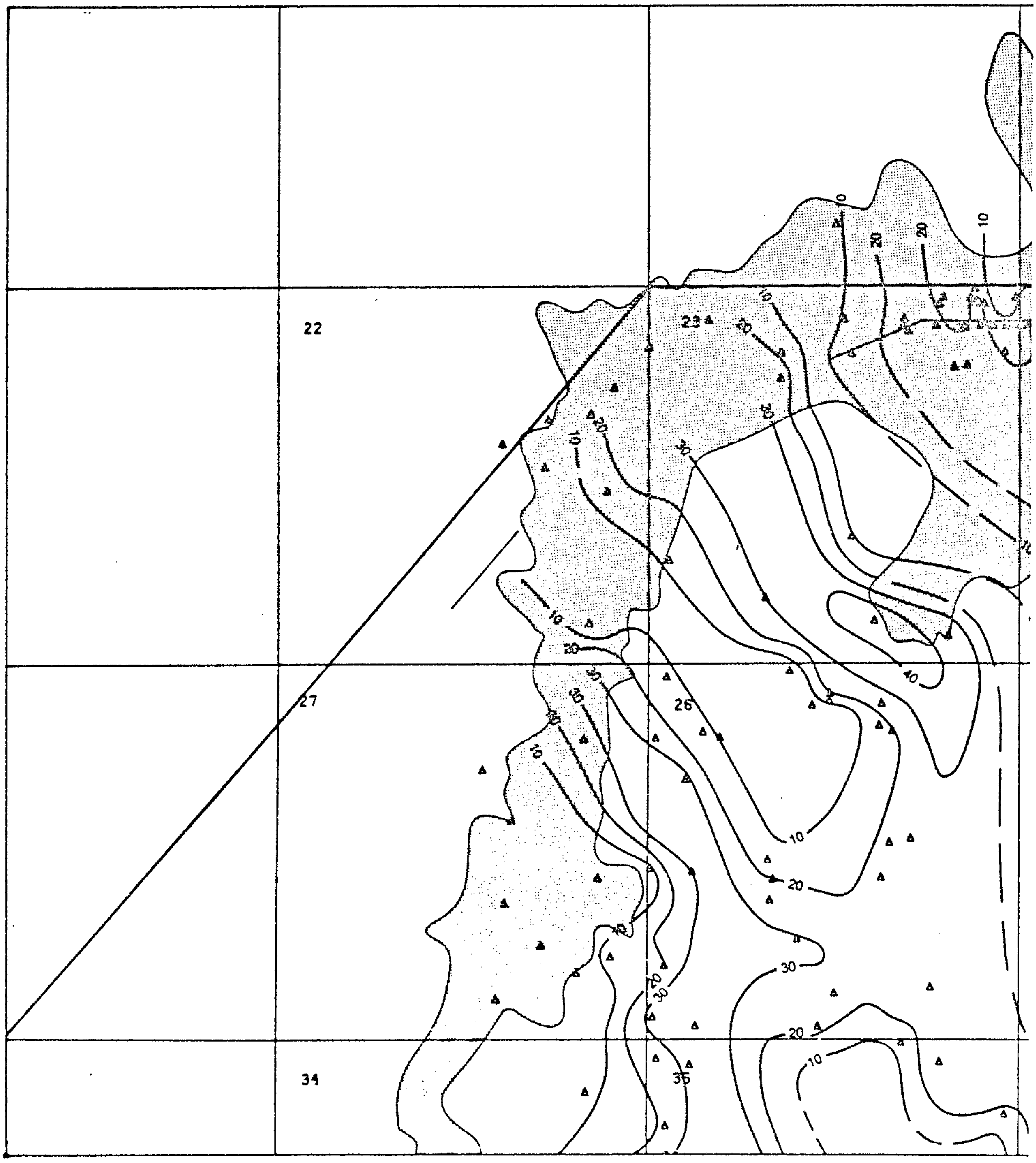
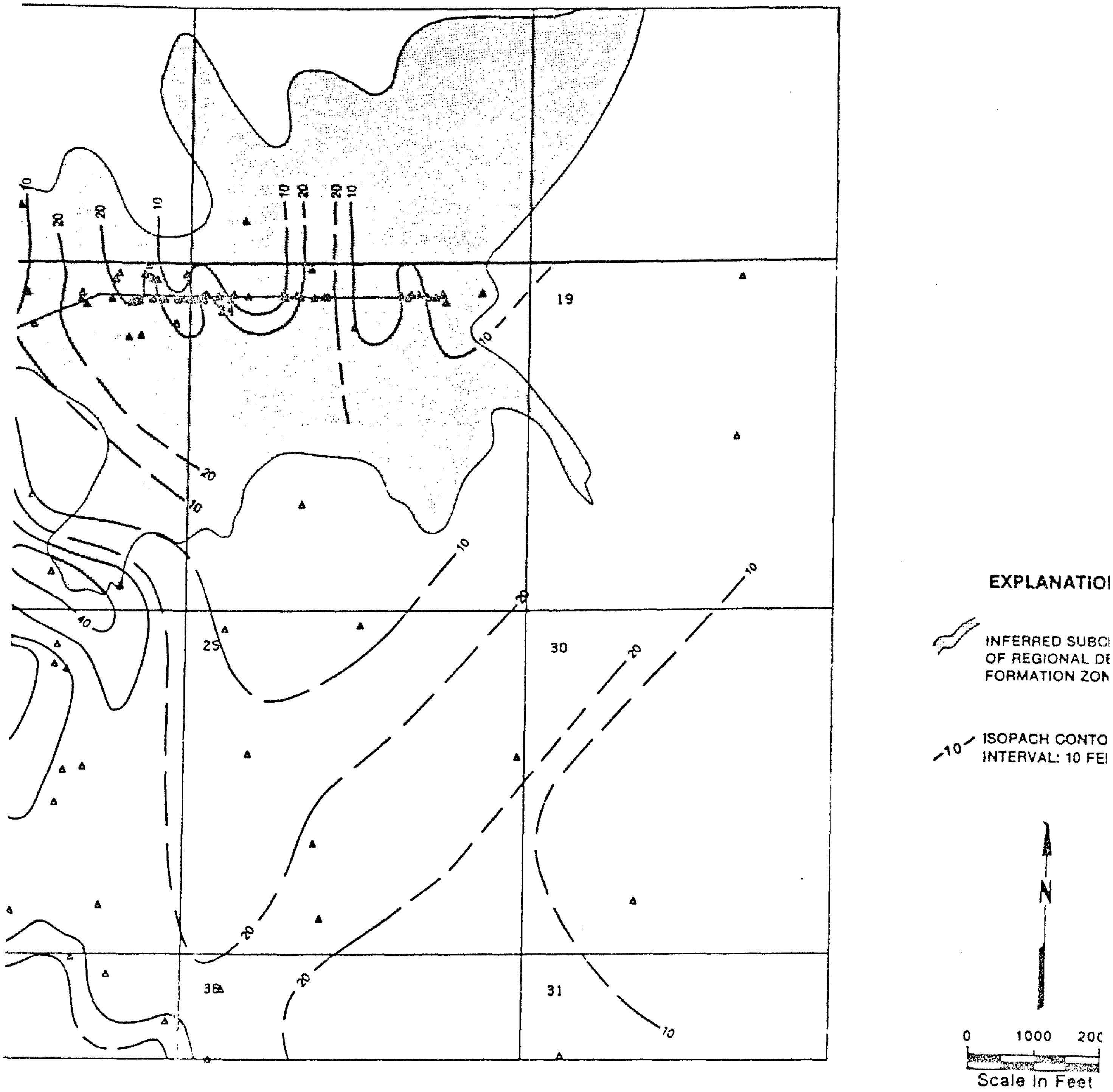


Figure E-3

NET SAND ISOPACH CONTOUR MAP OF REGIONAL DENVER FORMATION ZONE 2

SOURCE: ESE, 1988



ON ZONE 2

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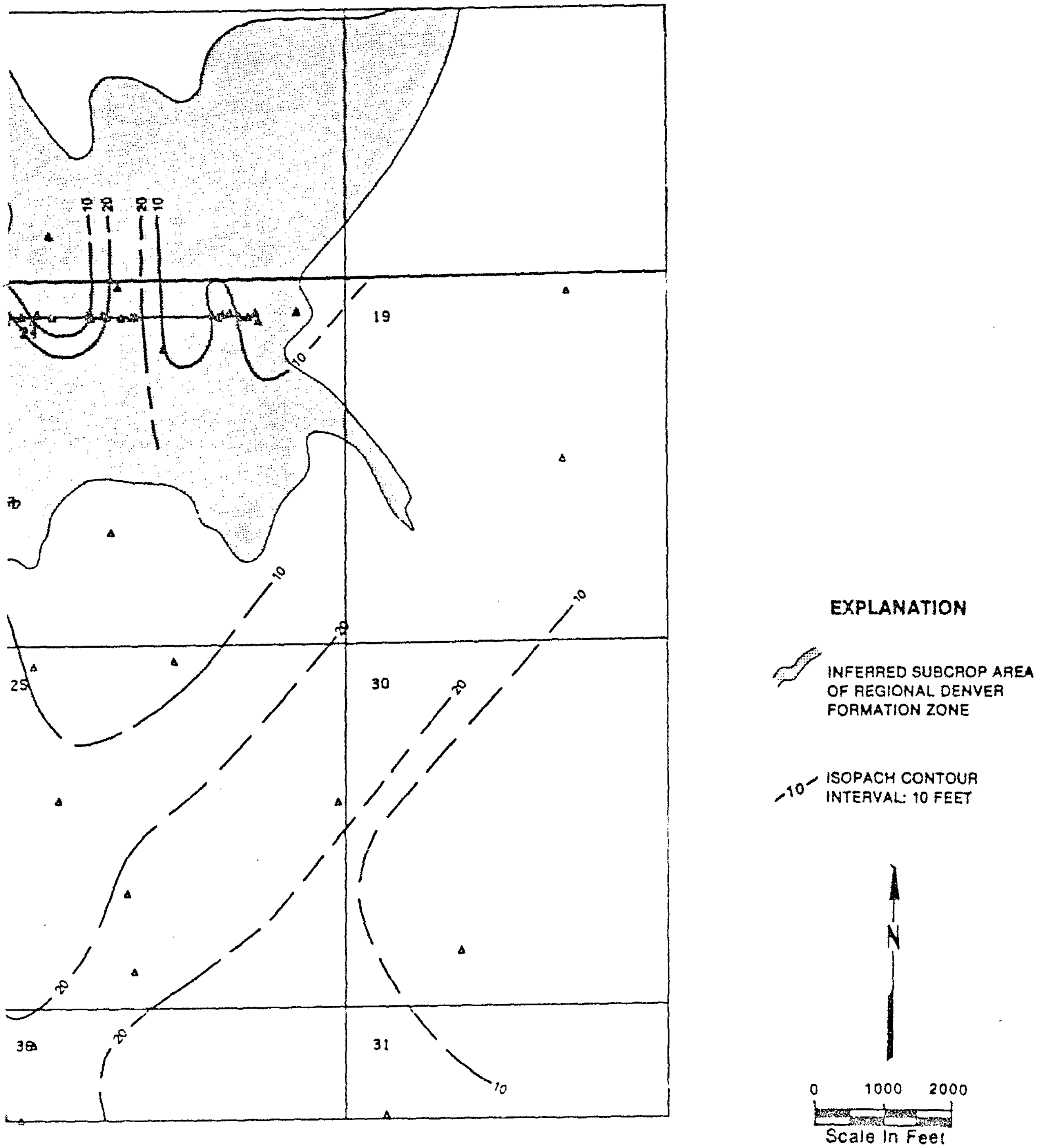
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



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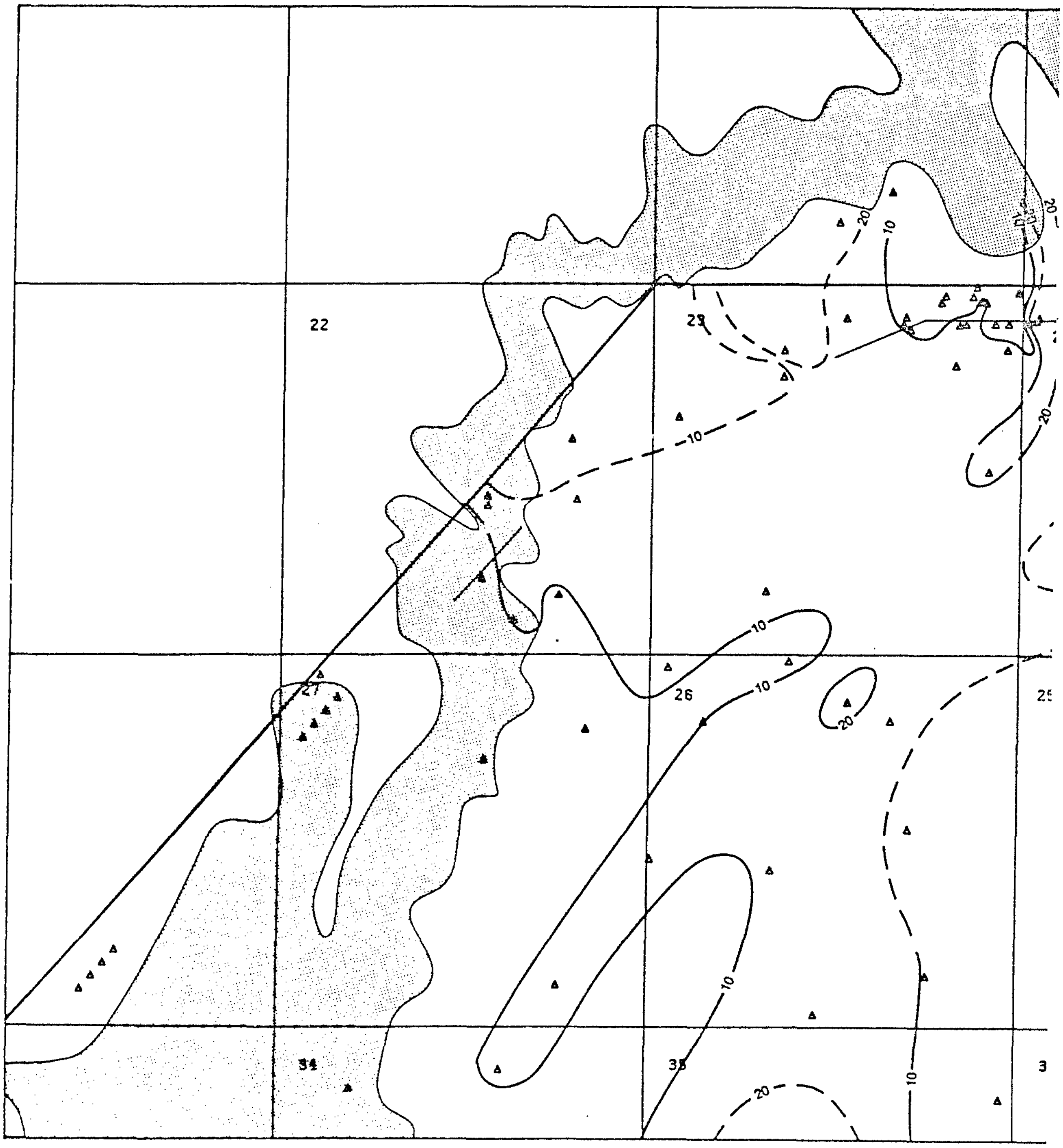
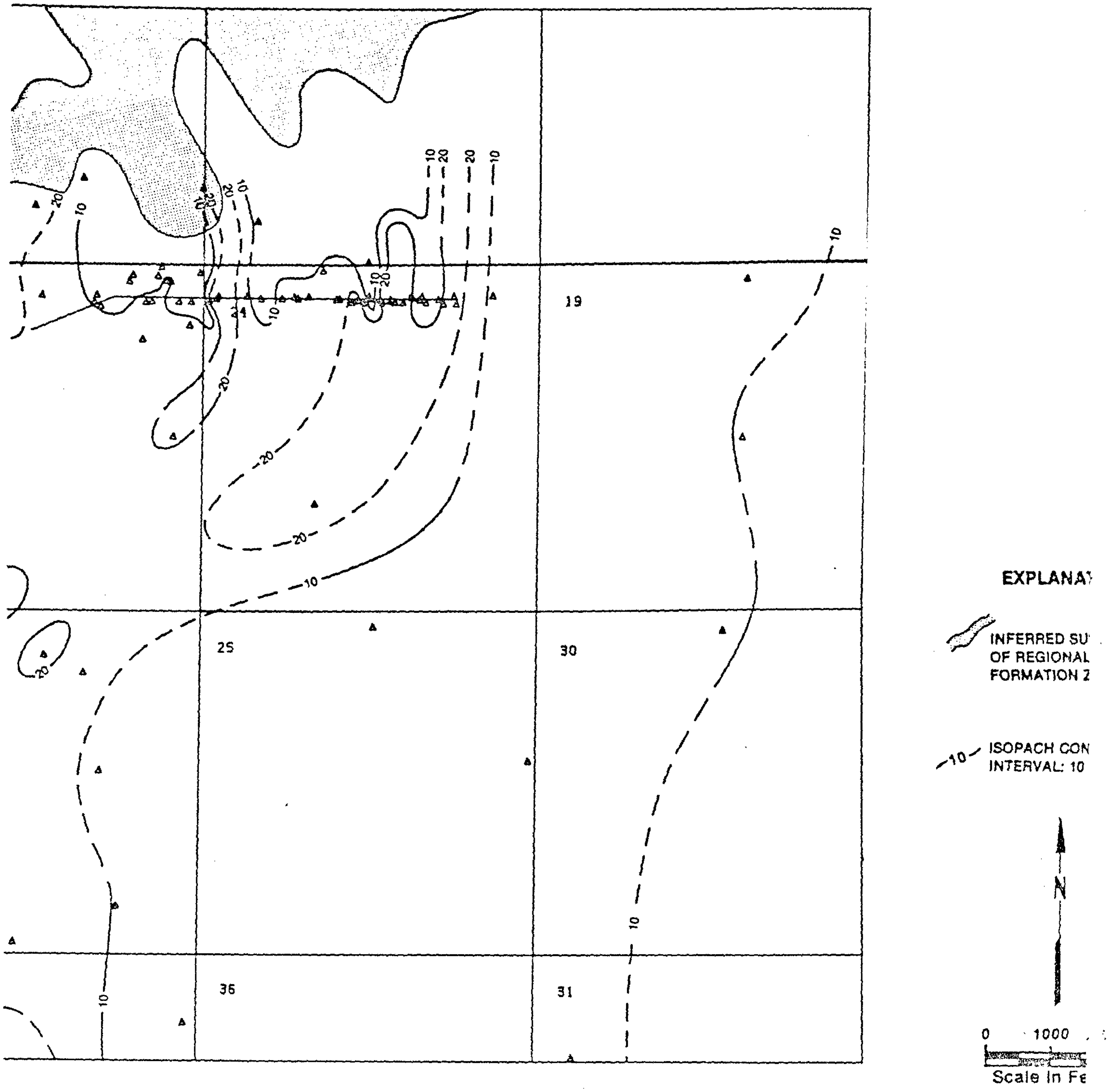


Figure E-4

NET SAND ISOPACH CONTOUR MAP OF REGIONAL DENVER FORMATION ZONE 3

SOURCE: ESE, 1988



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Prepared for:
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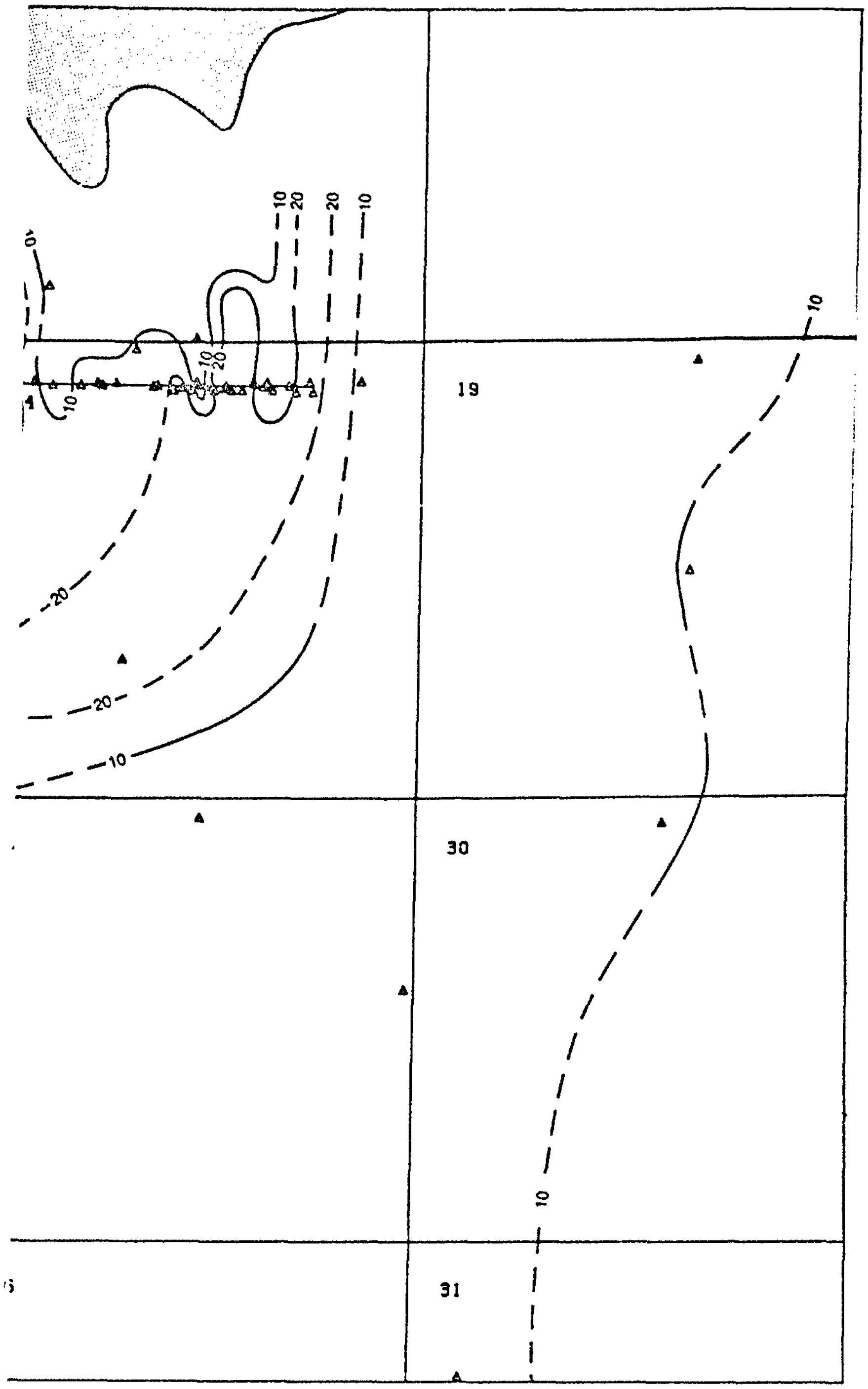
For Rocky Mountain Arse

Aberdeen Proving Ground, Maryland



EXPLANATION

INFERRED SUBCROP AREA OF REGIONAL DENVER FORMATION ZONE

ISOPACH CONTOUR INTERVAL: 10 FEET

N

0 1000 2 000

Scale In Feet

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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

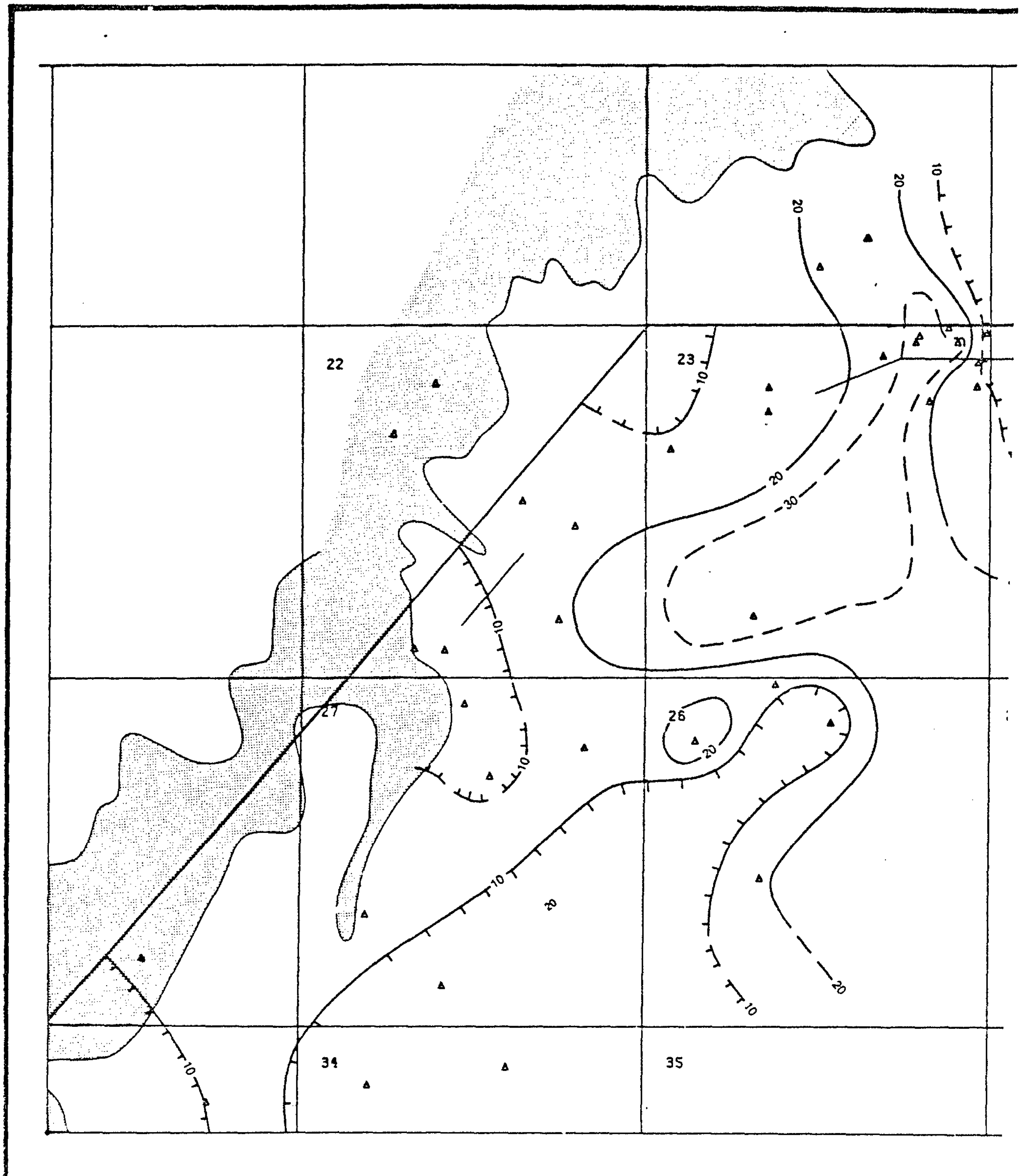
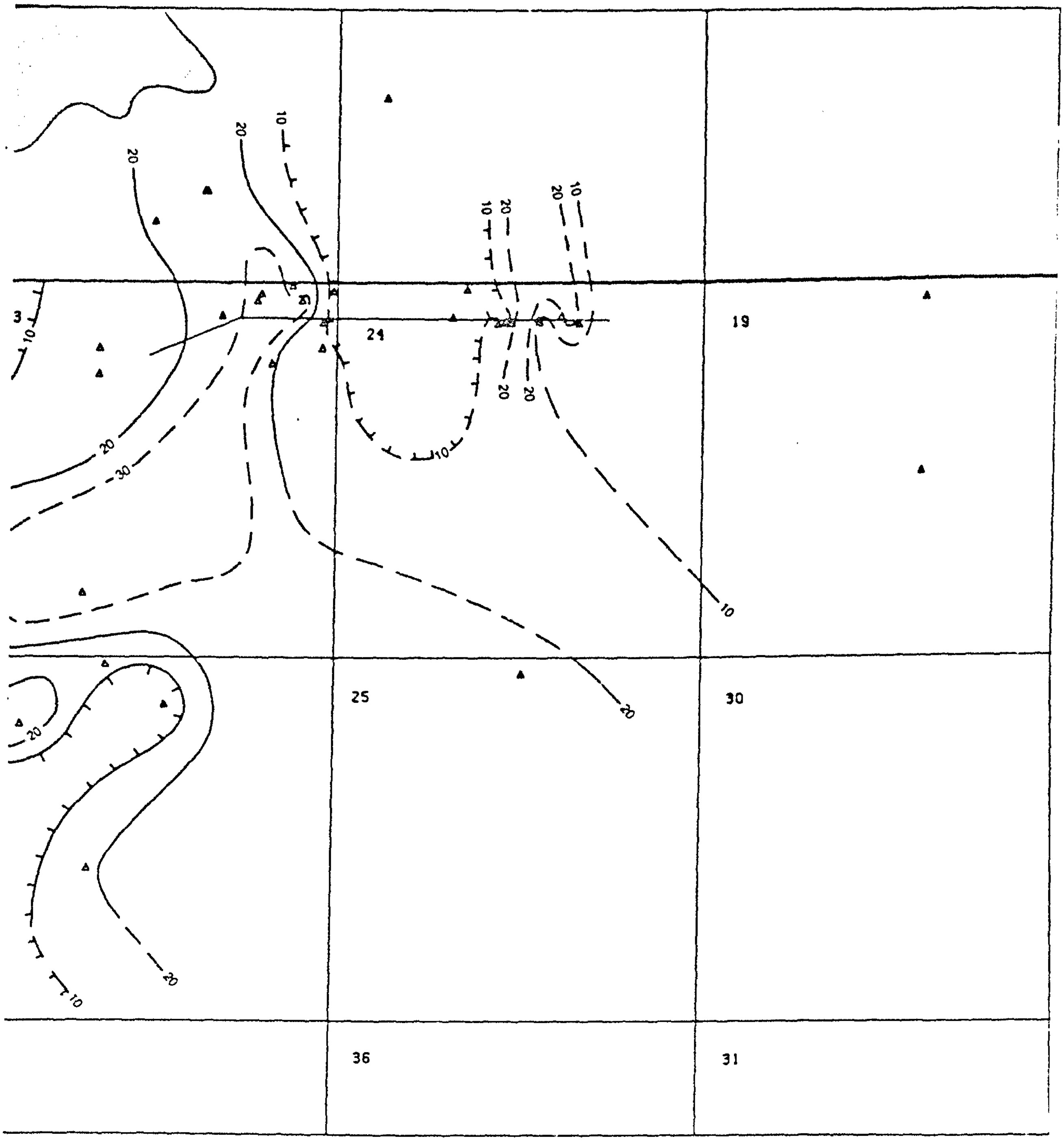


Figure E-5

NET SAND ISOPACH CONTOUR MAP OF REGIONAL DENVER FORMATION ZONE 4

SOURCE: ESE, 1988



ER FORMATION ZONE 4

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For Rocky Mount

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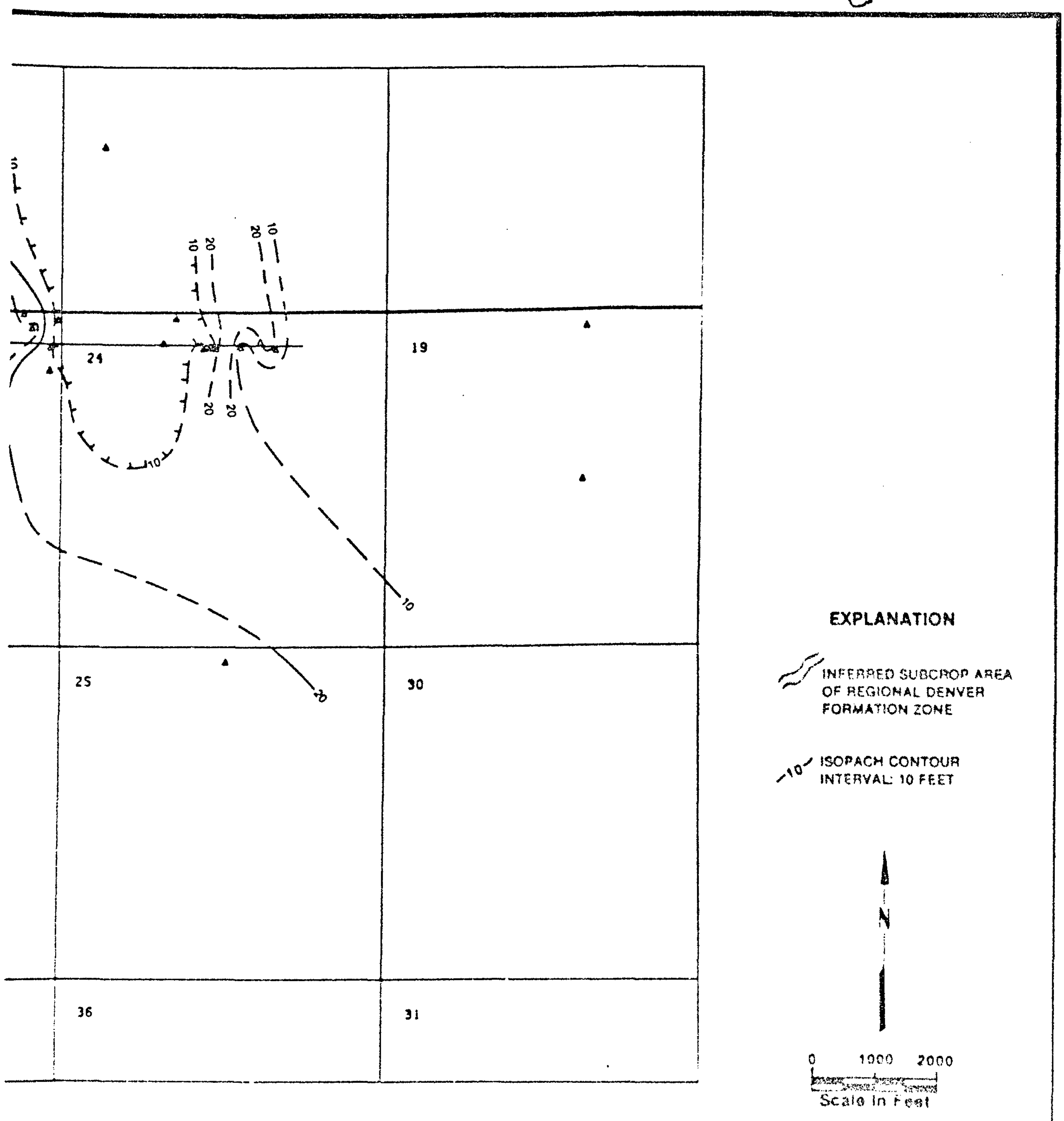

Prepared for:
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Aberdeen Proving Ground, Maryland

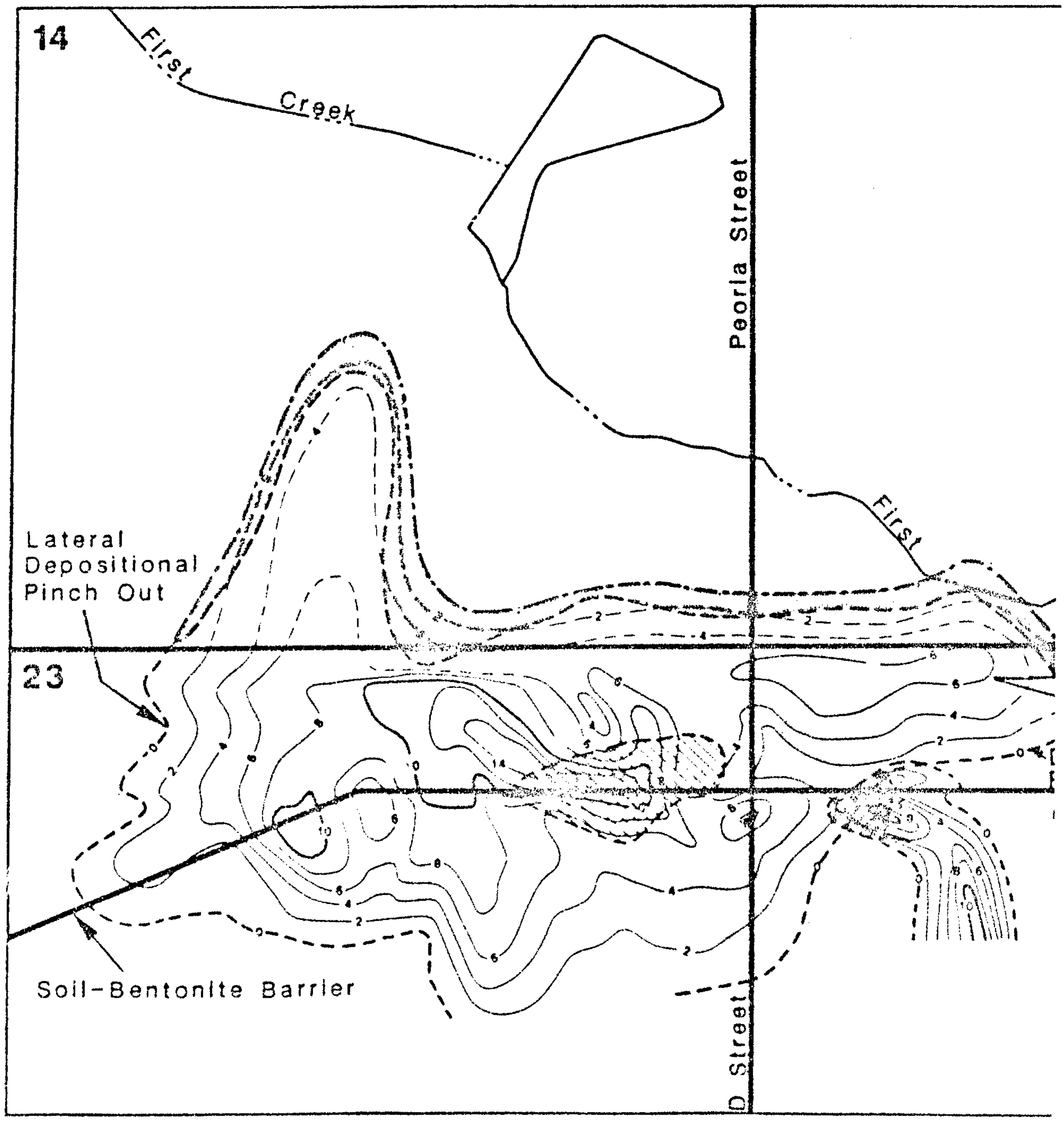
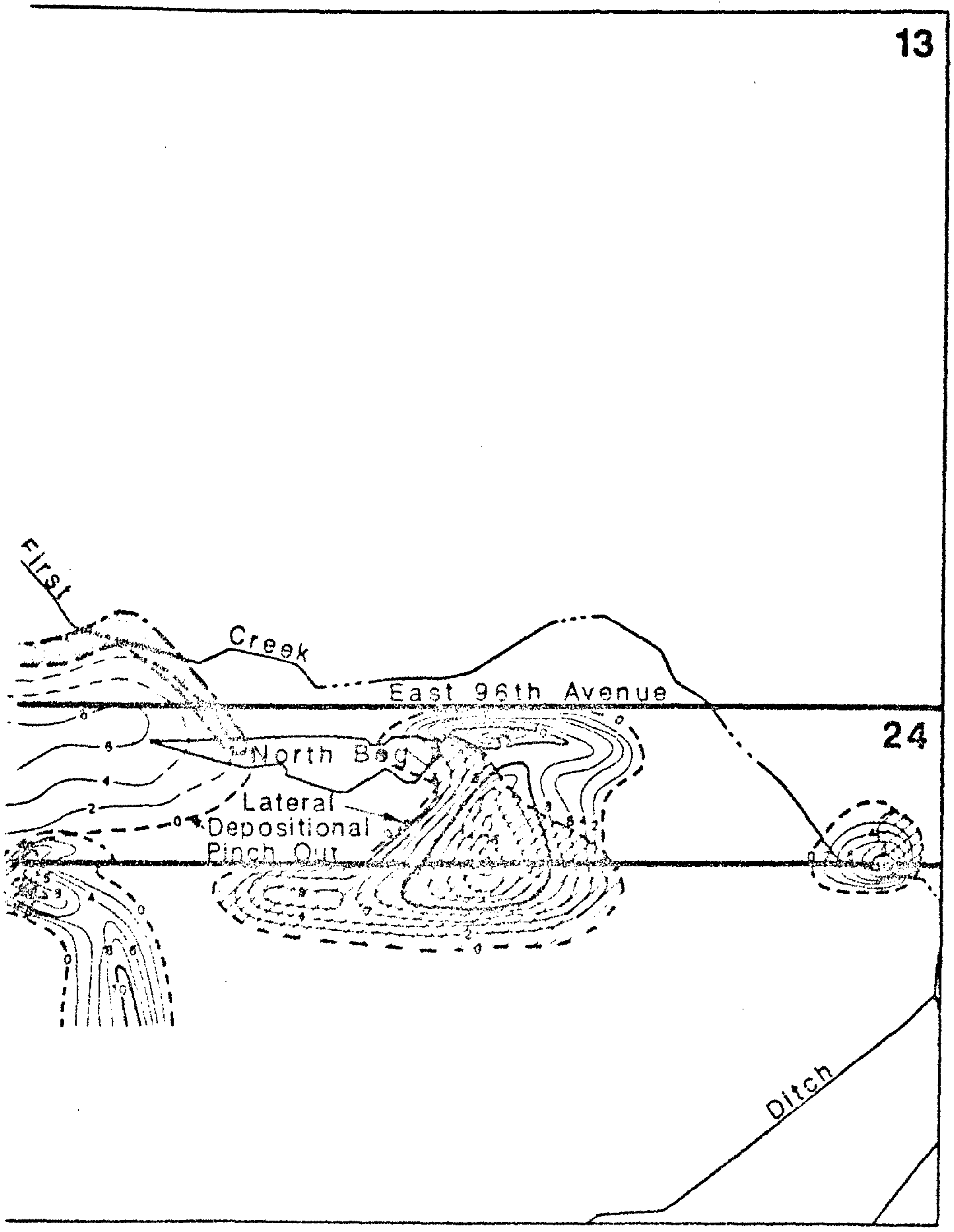


Figure E-6

ISOPACH MAP OF THE NBW#1A AND NBE#1 SANDSTONE UNITS

SOURCE: HLA, 1988



EXPLANATION

Erosional Truncation c
Sandstone Unit

Inferred Area of Subc
NBW #1A Sandstone

Inferred Area of Subc
NBE #1 Sandstone Ur

Areal Geologic Con
Between NBW #1A
NBW #1 Sandstone

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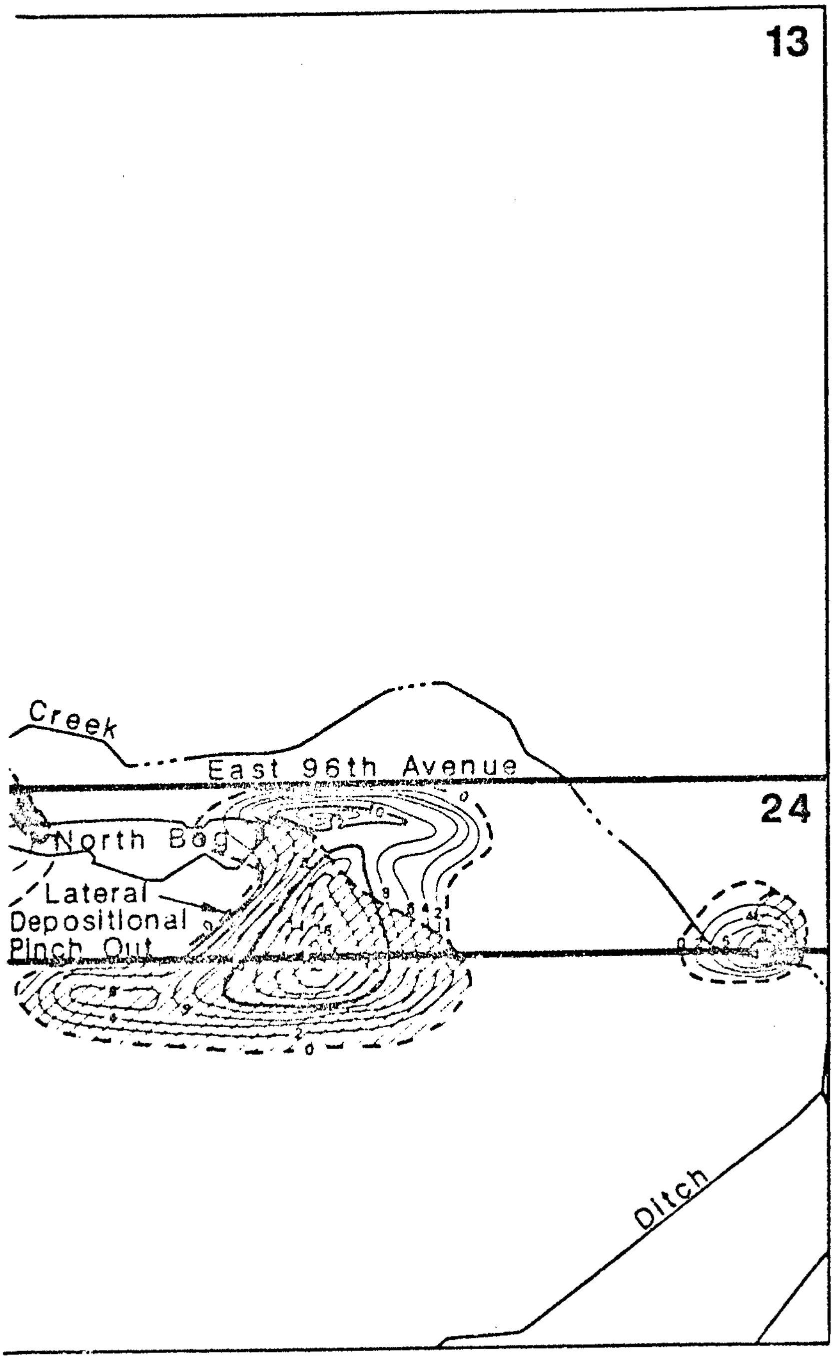
Scale In Feet

Prepared for:
U.S. Army Program Manage
For Rocky Mountain Arsena

Aberdeen Proving Ground, Maryland



EXPLANATION

Erosional Truncation of the Sandstone Unit

Inferred Area of Subcrop, NBW #1A Sandstone Unit

Inferred Area of Subcrop, NBE #1 Sandstone Unit

Areal Geologic Contact Between NBW #1A and NBW #1 Sandstone Units

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Scale In Feet

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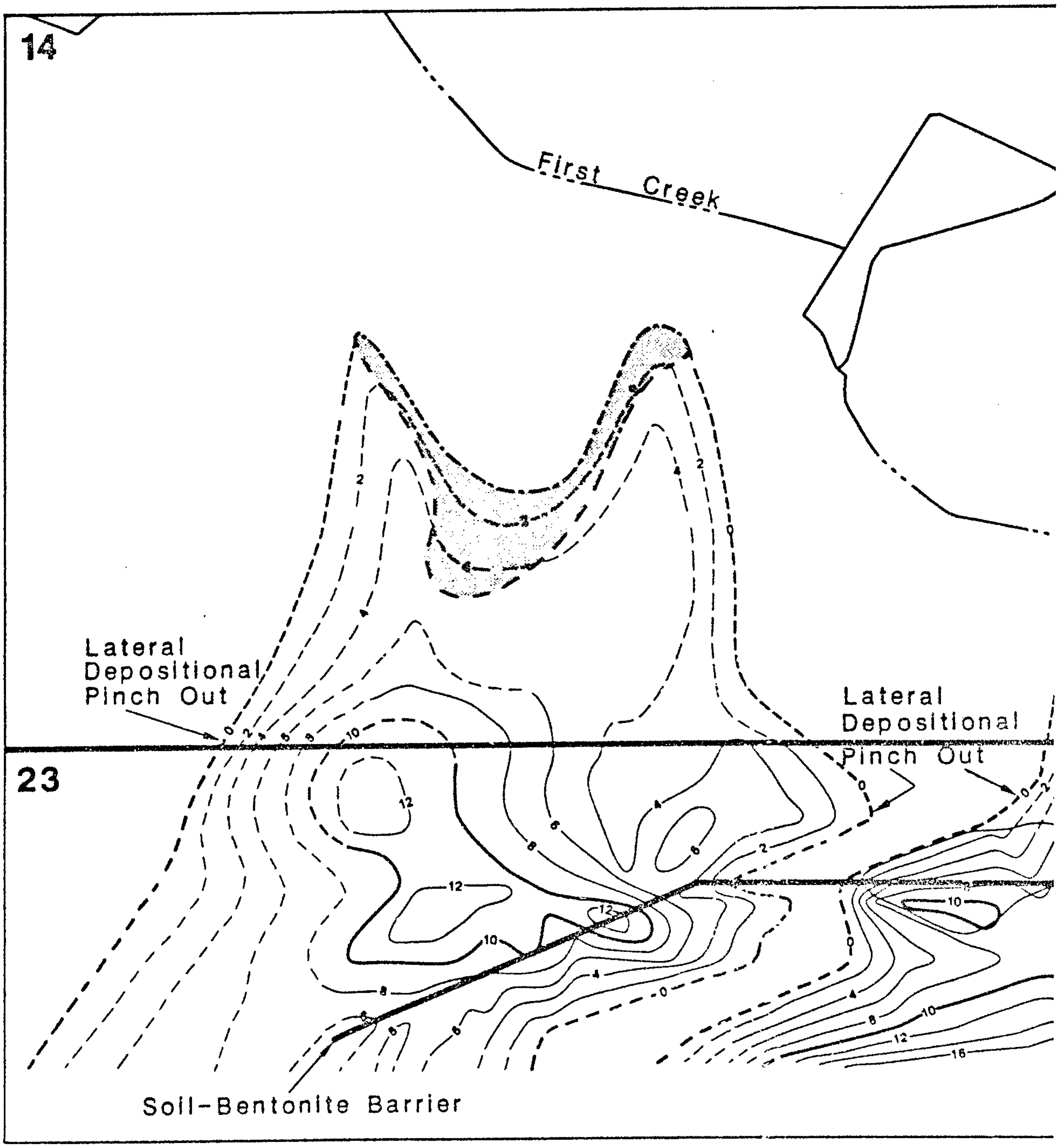
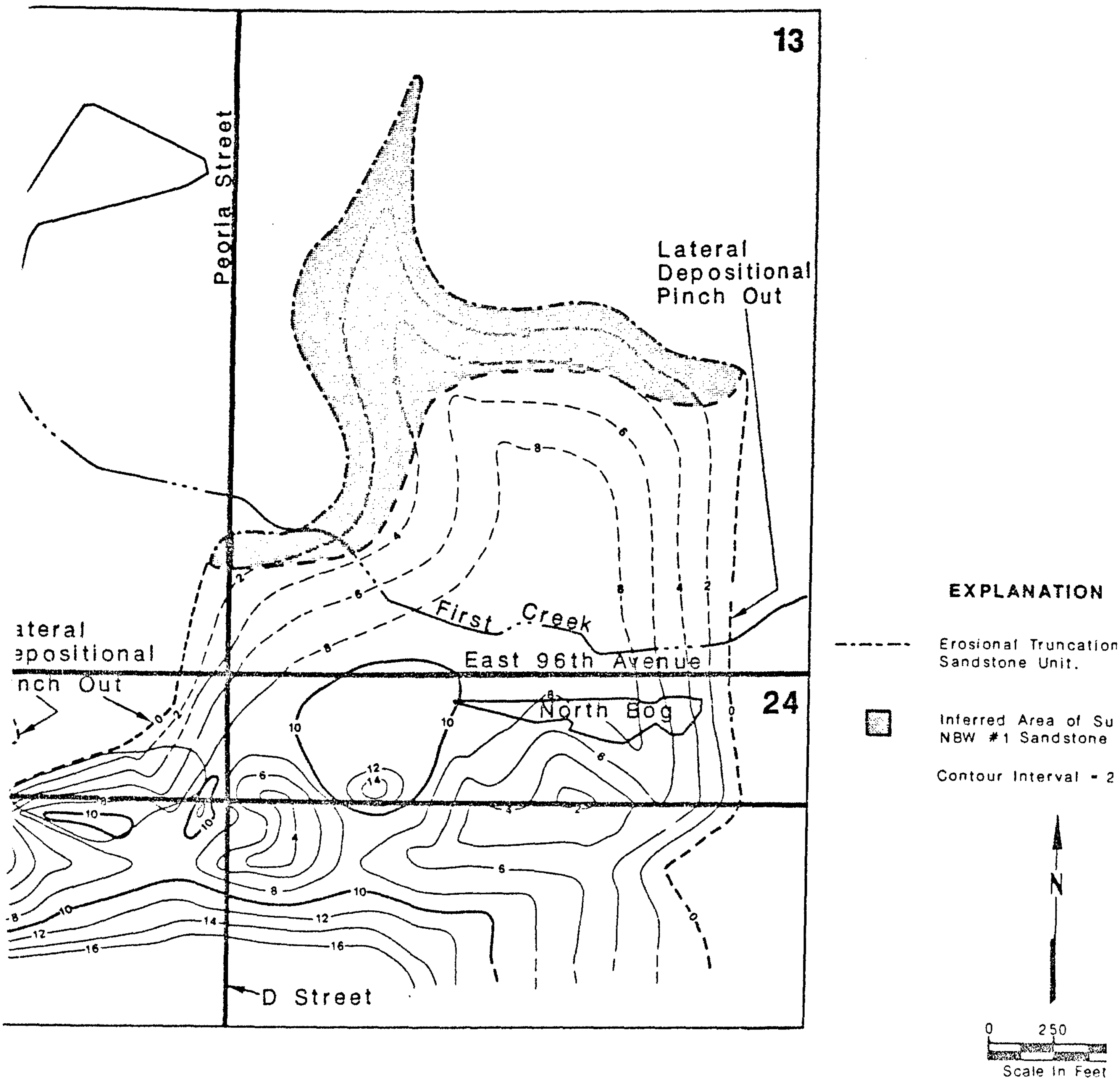


Figure E-7

ISOPACH MAP OF THE NBW#1 SANDSTONE UNIT

SOURCE: HLA 1988



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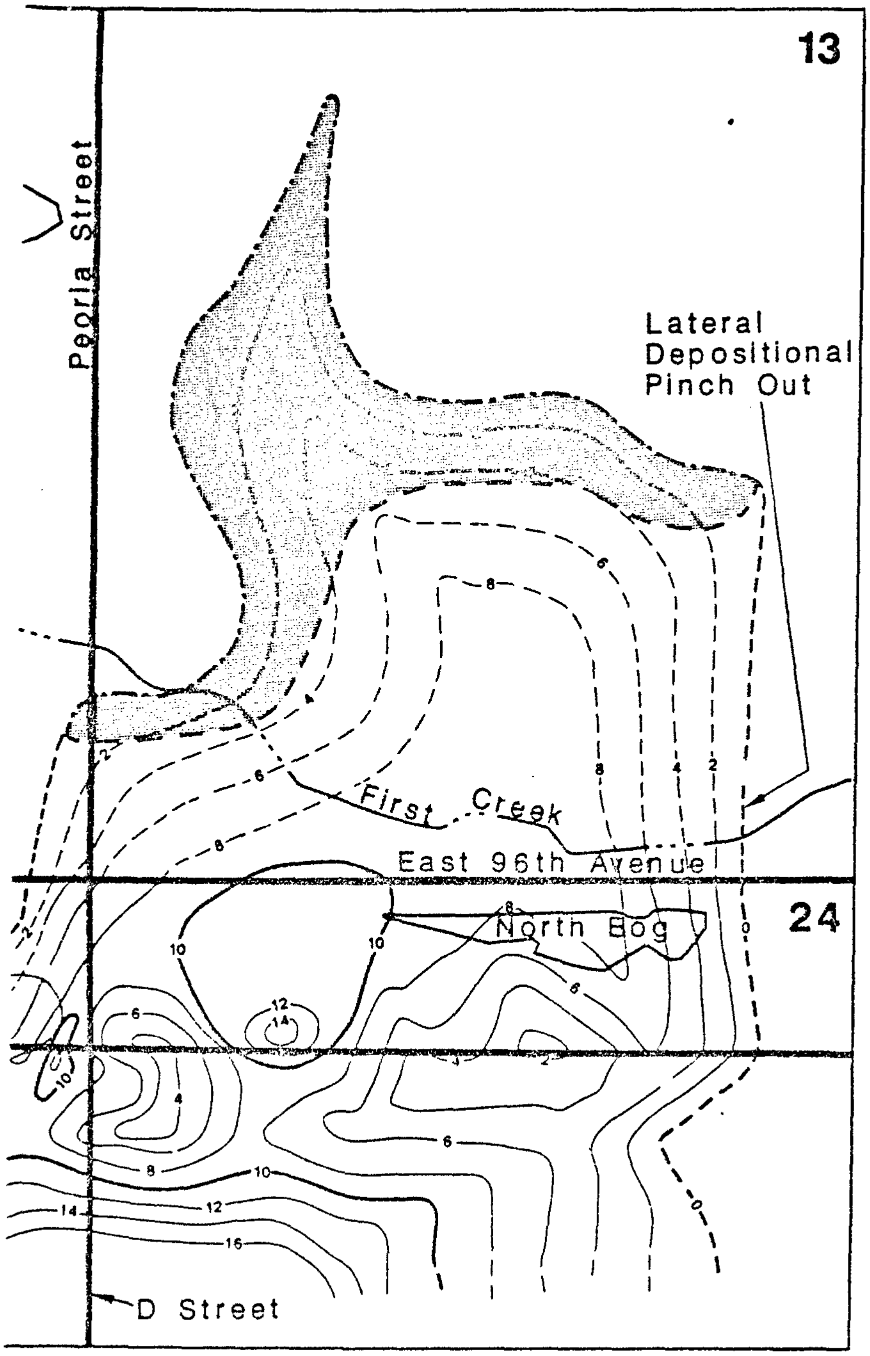
For Rocky Mountain Arsen

Aberdeen Proving Ground, Maryland

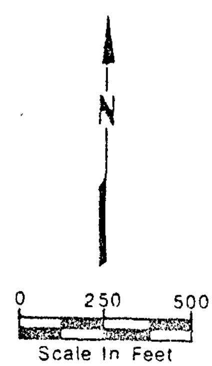


EXPLANATION

Erosional Truncation of the Sandstone Unit.

Inferred Area of Subcrop, NBW #1 Sandstone Unit

Contour Interval = 2 Feet



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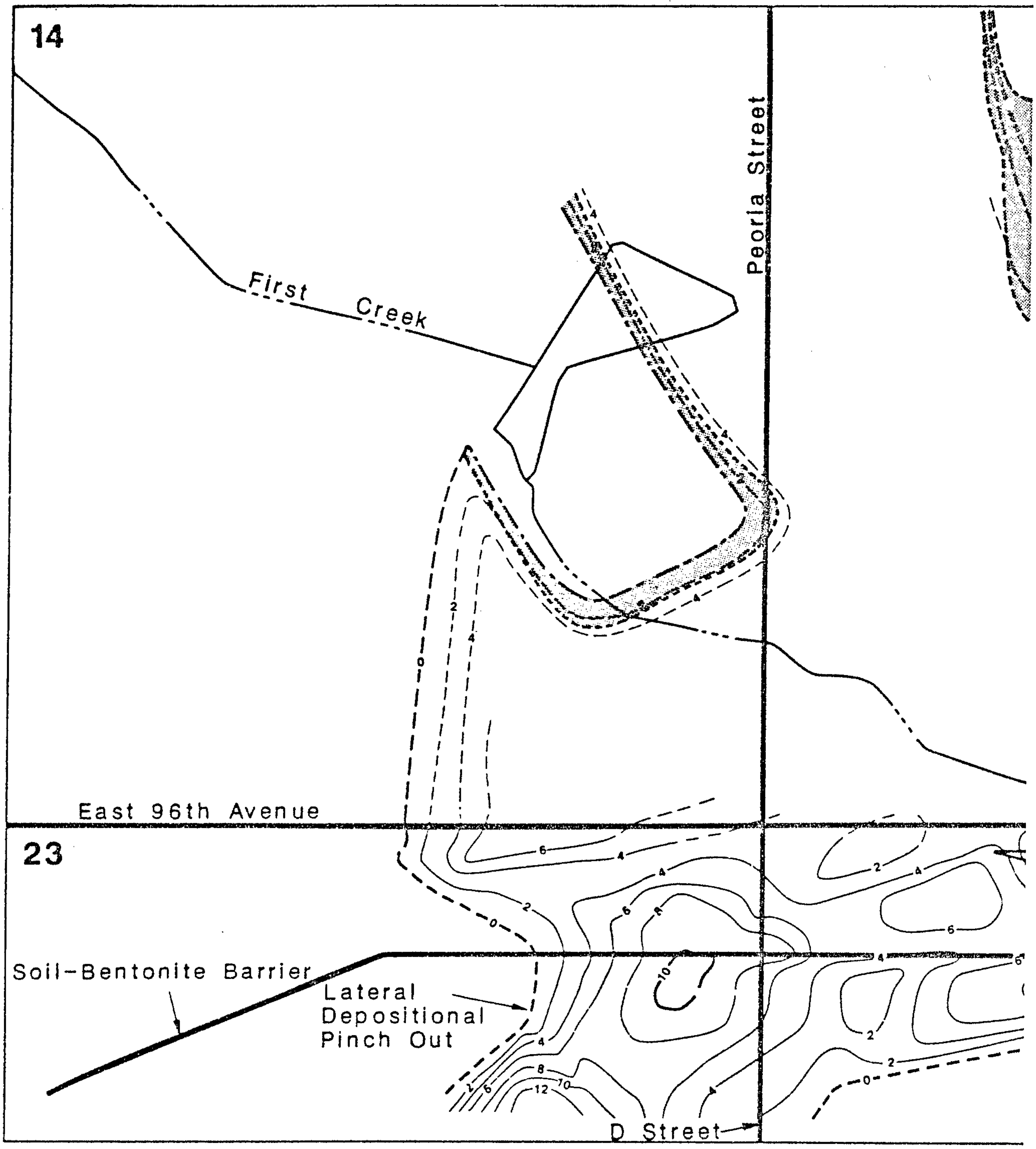
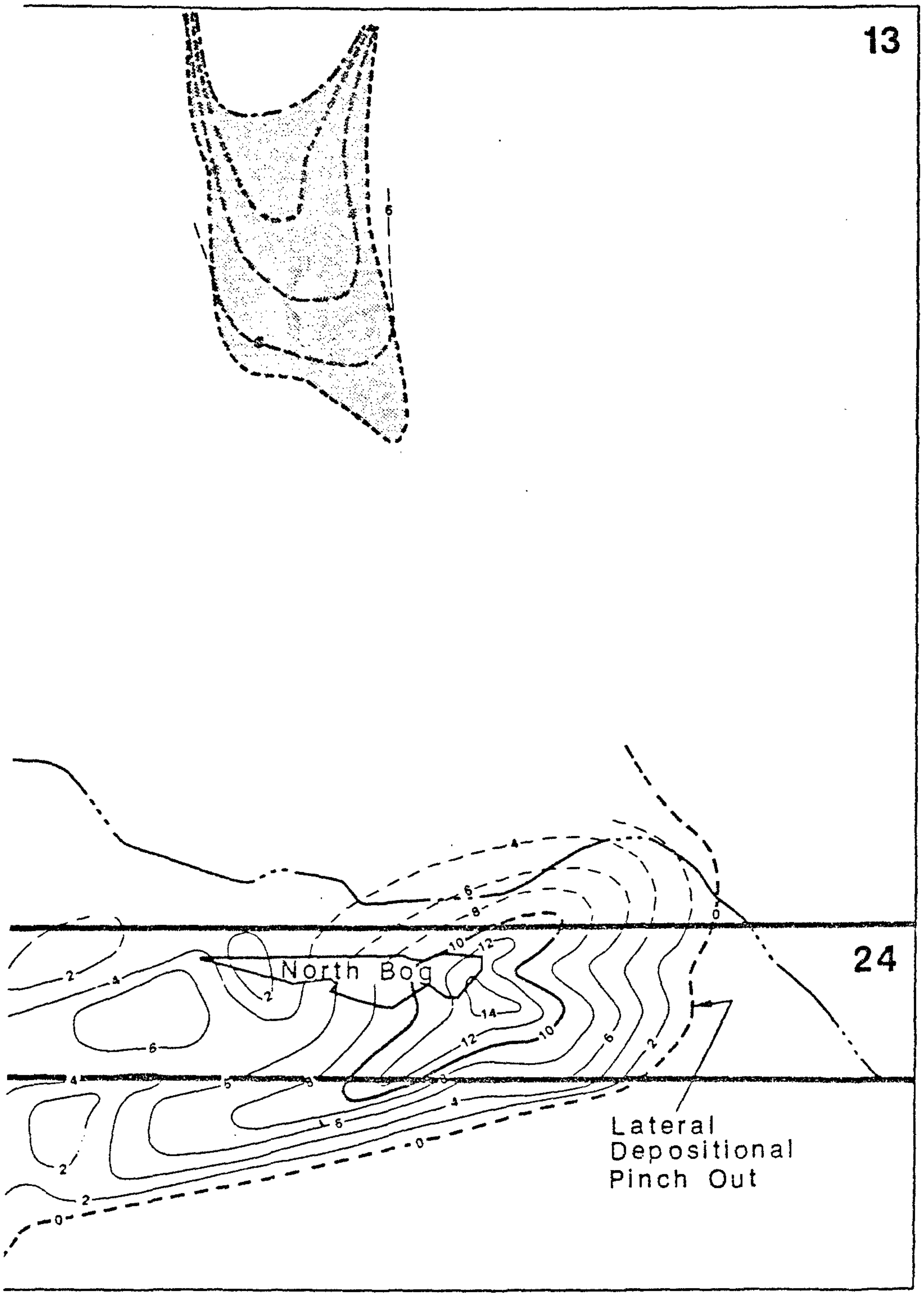


Figure E-8

ISOPACH MAP OF THE NBW#2 SANDSTONE UNIT

SOURCE: HLA 1988



EXPLANATION

Erosional Truncation of Sandstone Unit

Inferred Area of Subcr NBW #2 Sandstone U

Contour Interval = 2 Fe

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Scale In Feet

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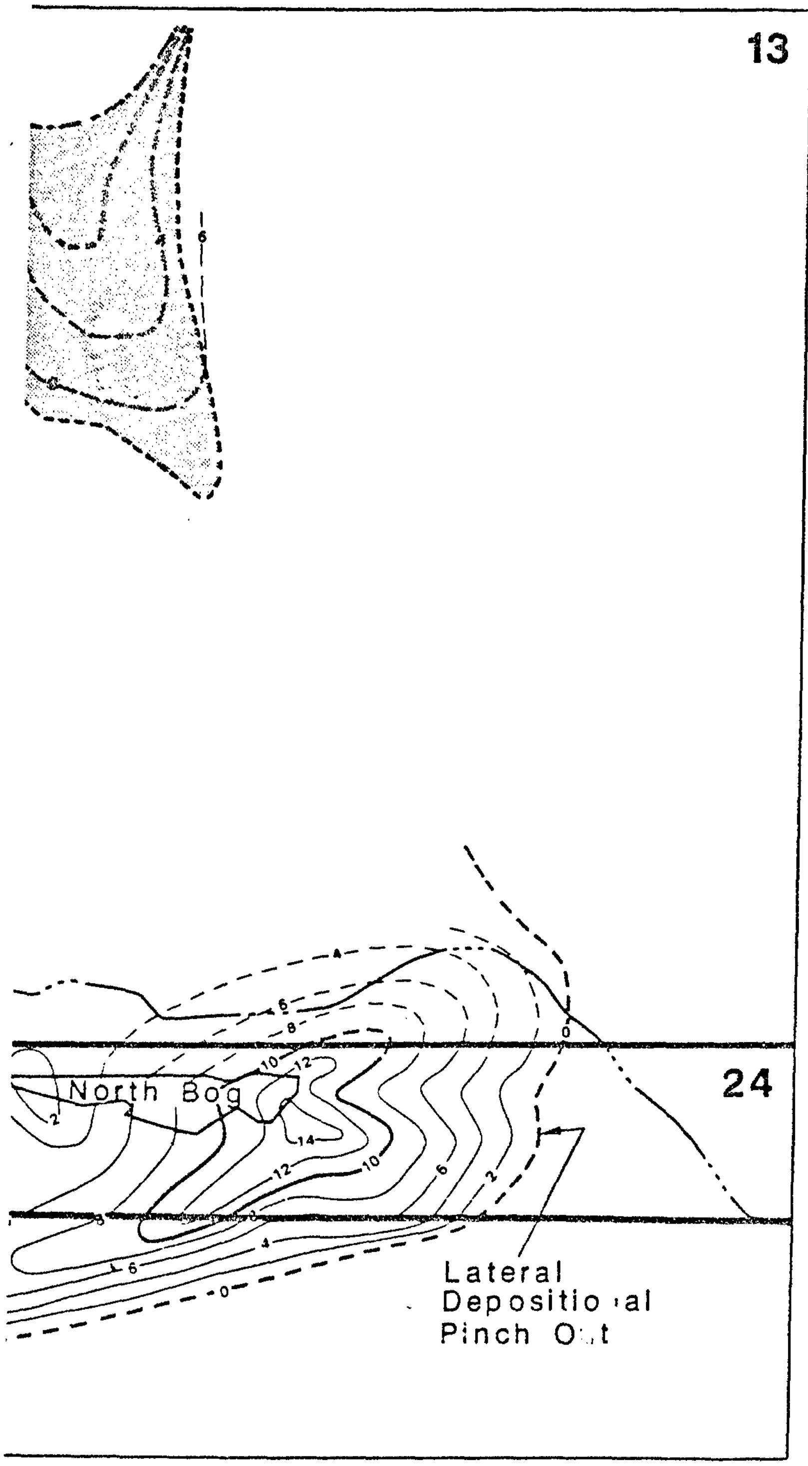

EXPLANATION

Erosional Truncation of the Sandstone Unit

Inferred Area of Subcrop, NBW #2 Sandstone Unit

Contour Interval = 2 Feet

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Scale In Feet

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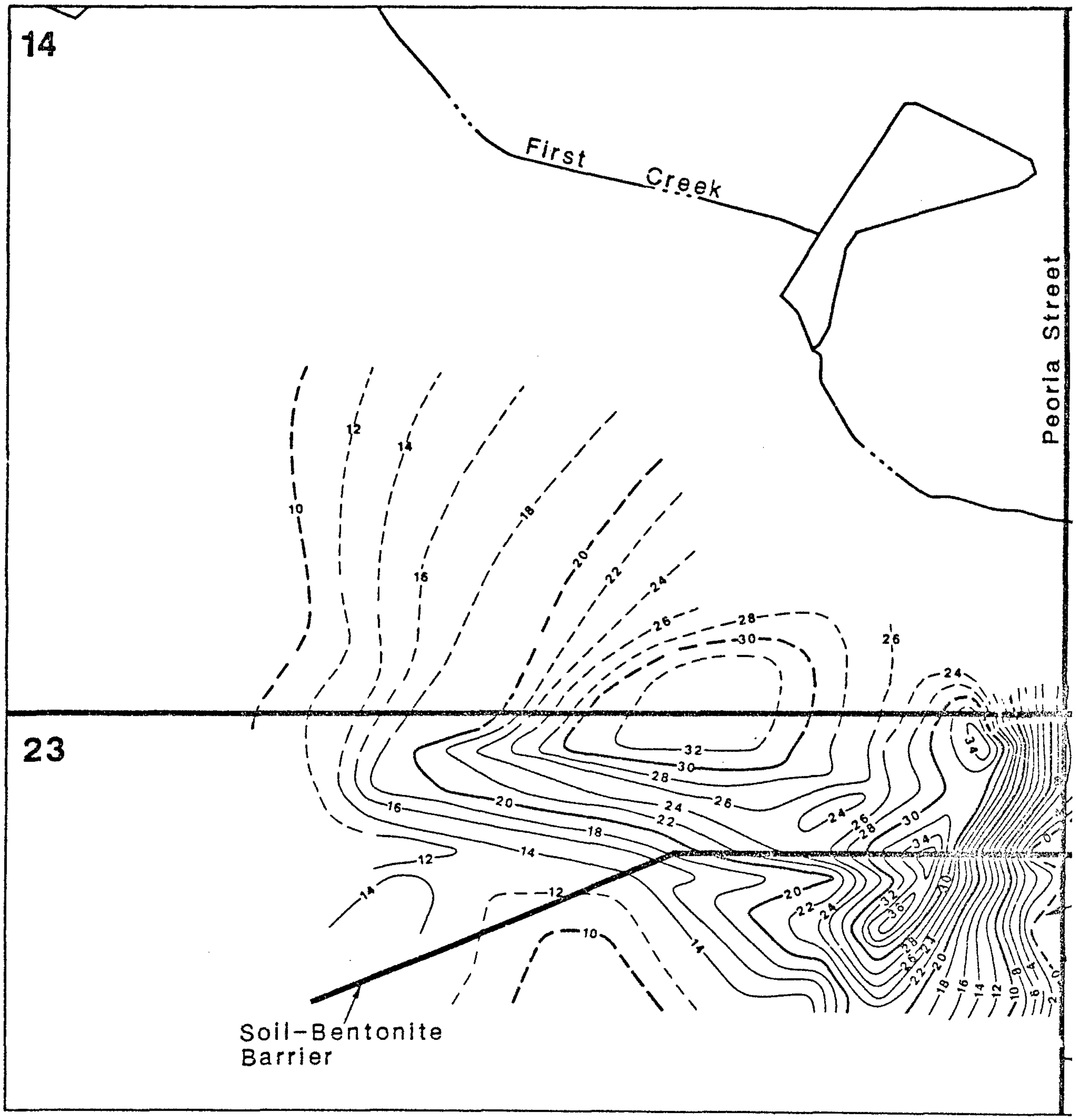
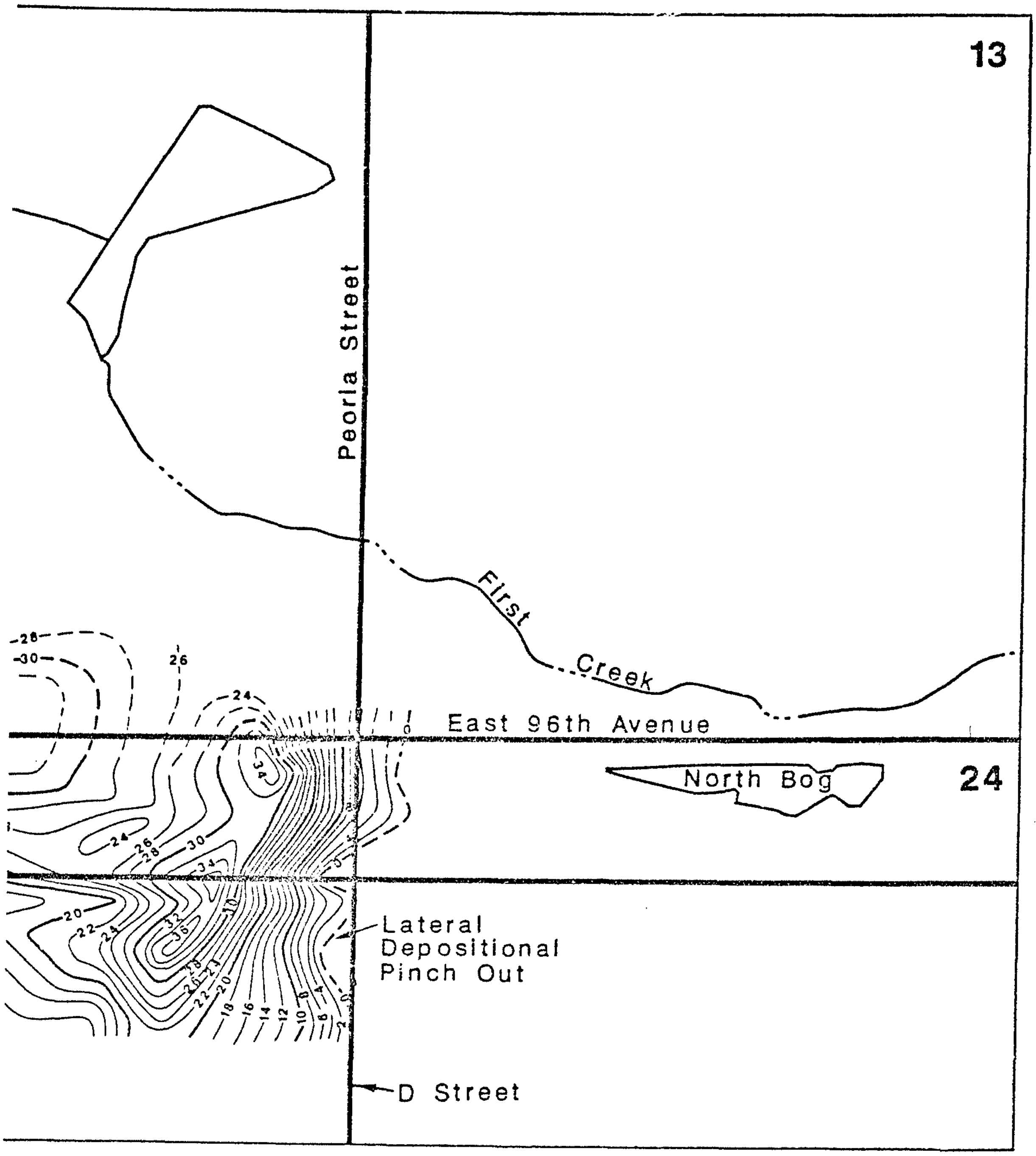


Figure E-9

ISOPACH MAP OF THE NBW#3 SANDSTONE UNIT

SOURCE: HLA, 1988



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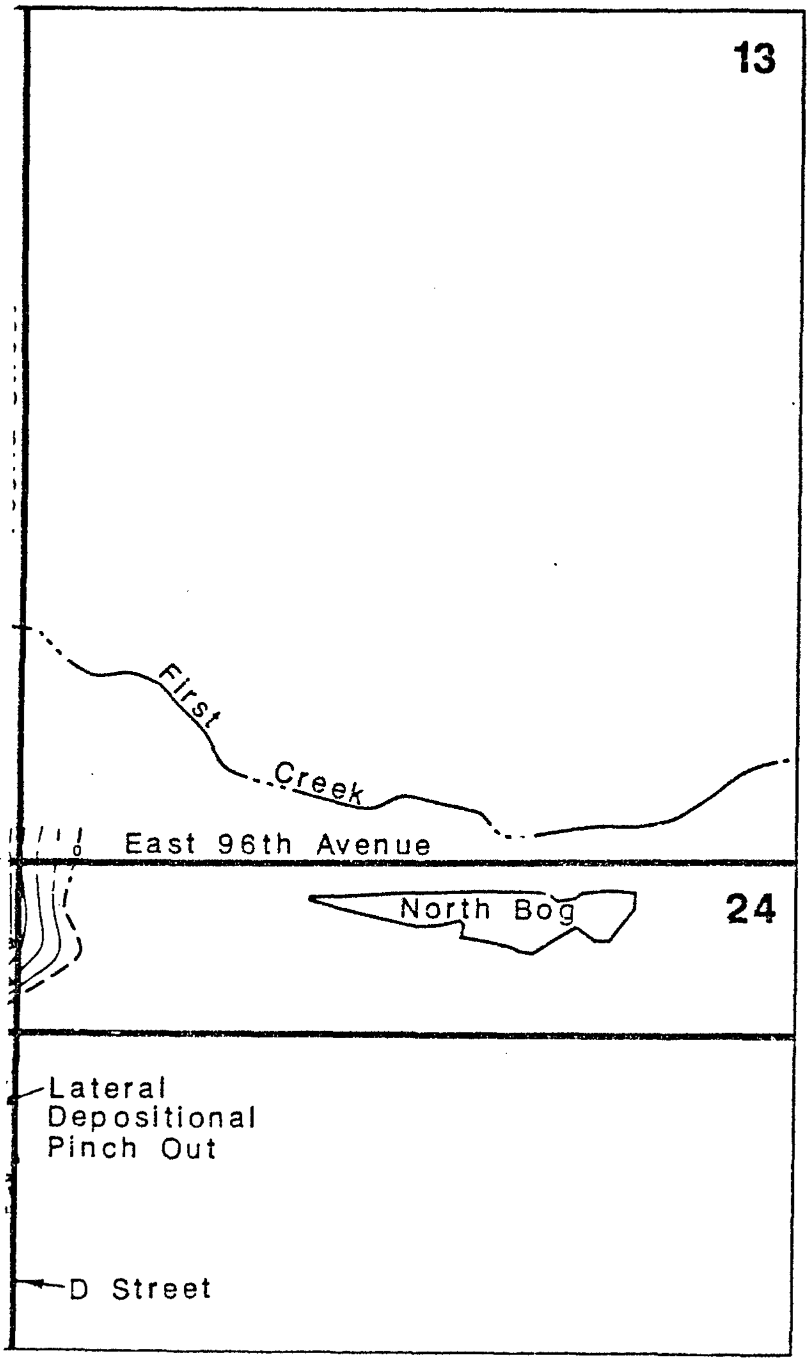
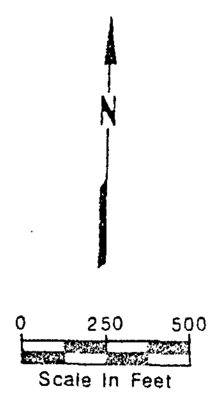


EXPLANATION

Contour Interval = 2 Feet



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Aberdeen Proving Ground, Maryland

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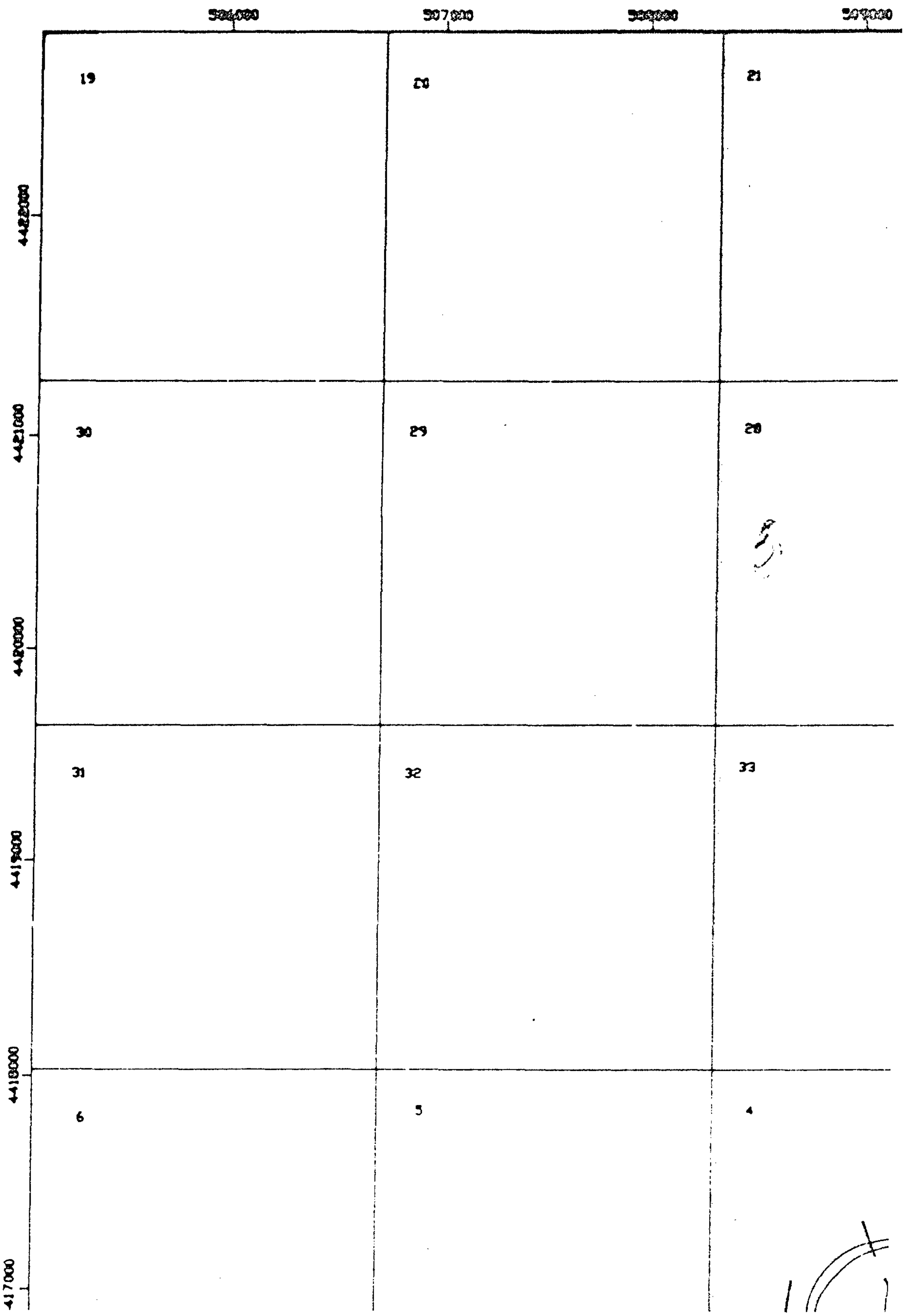

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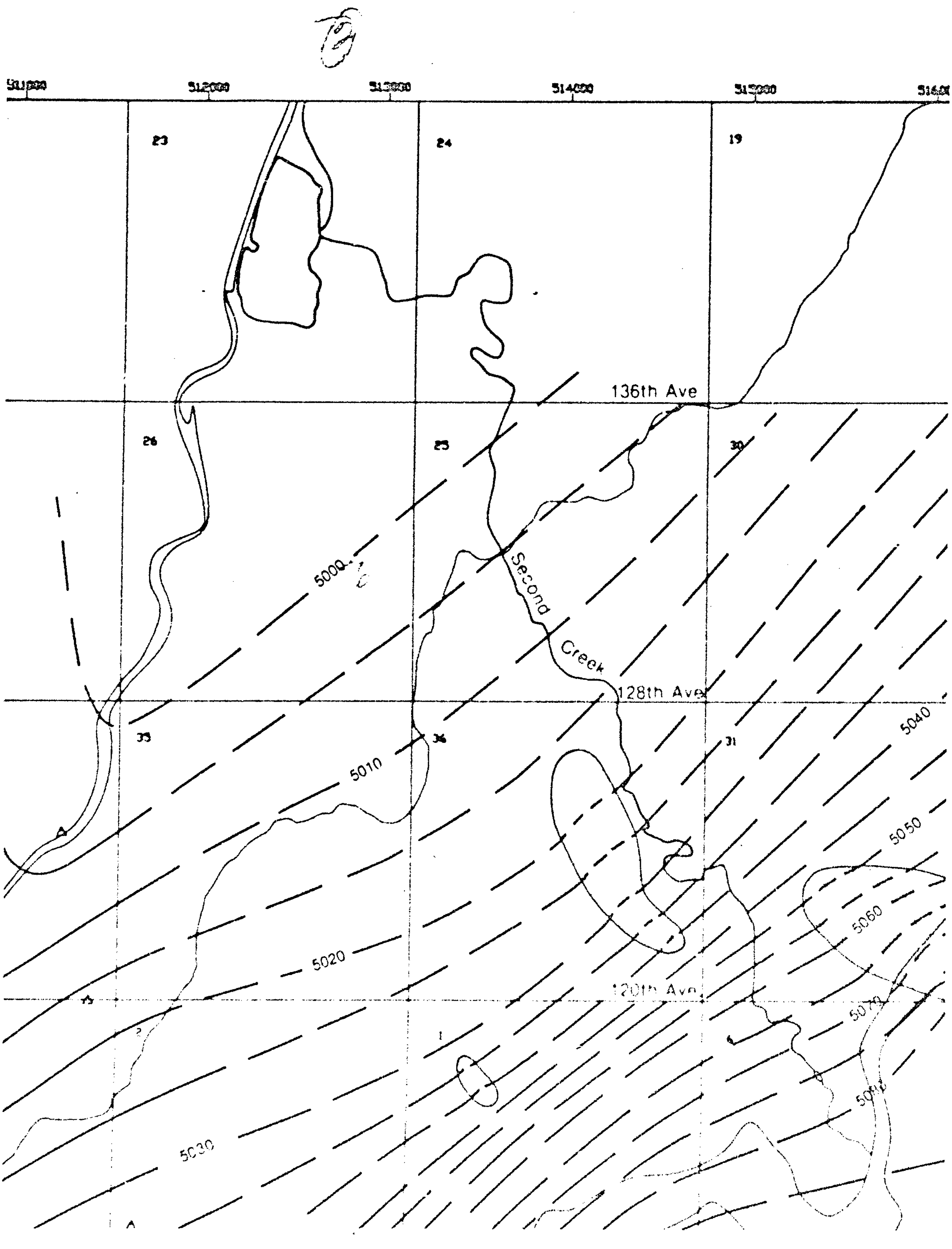
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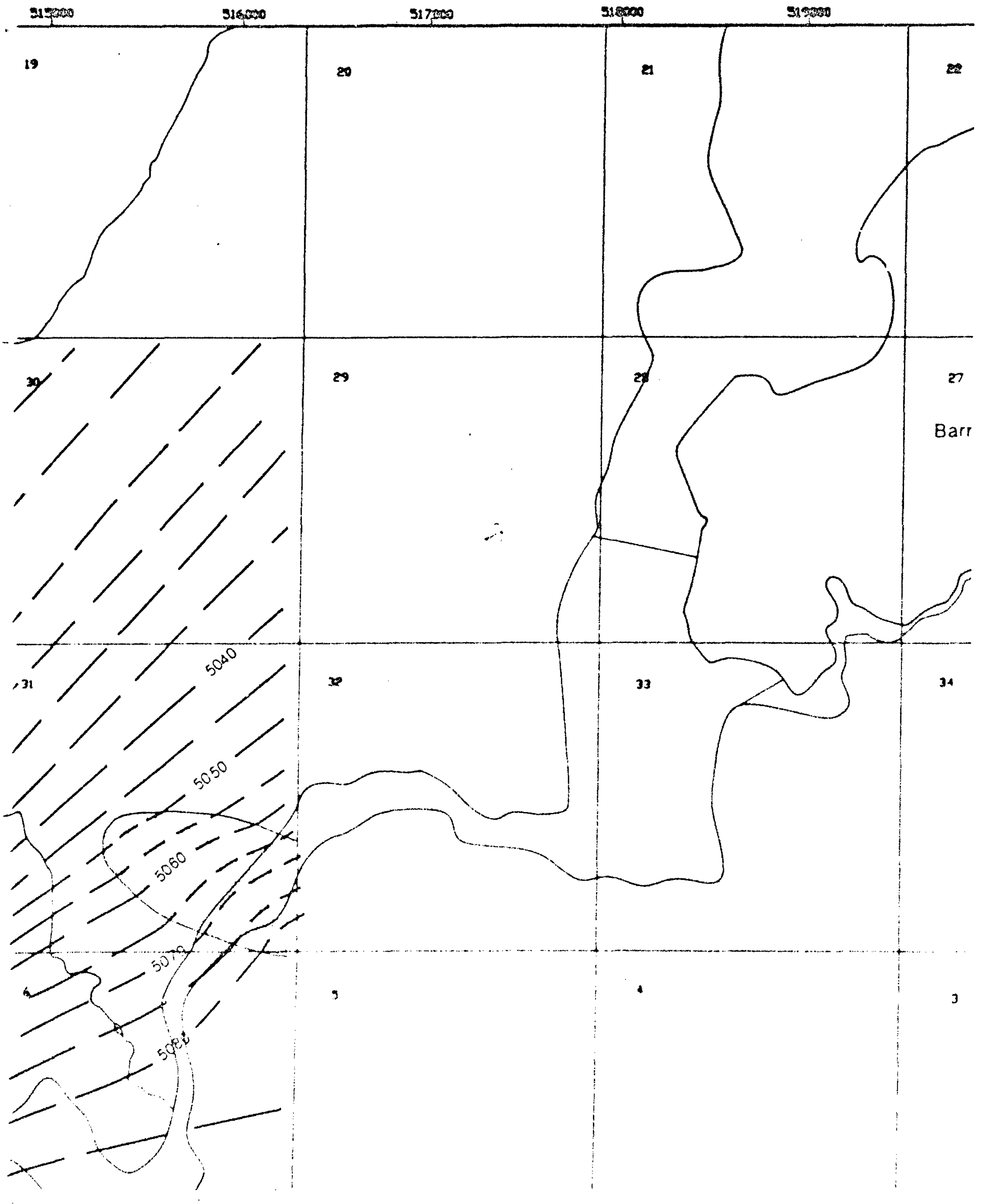

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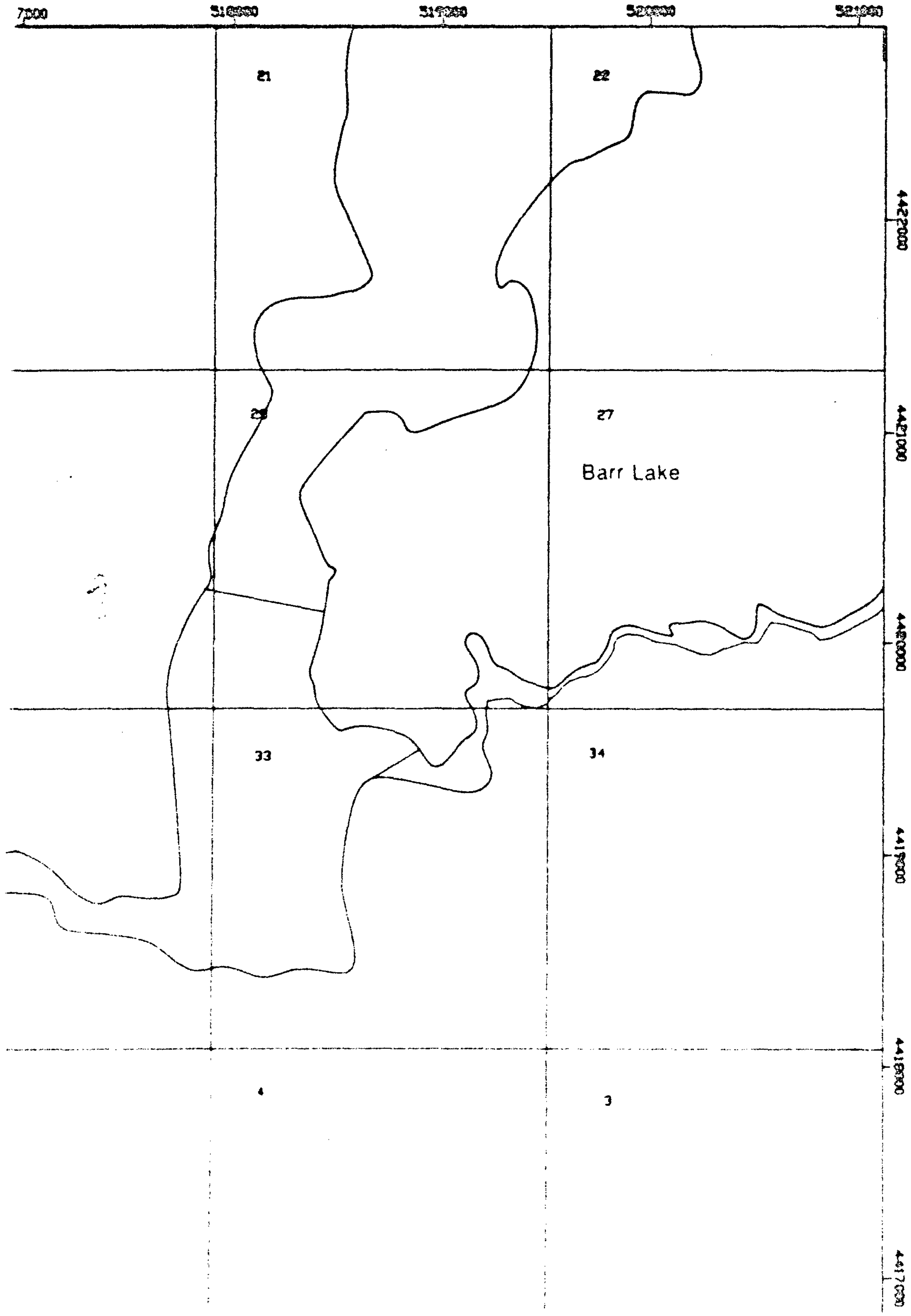

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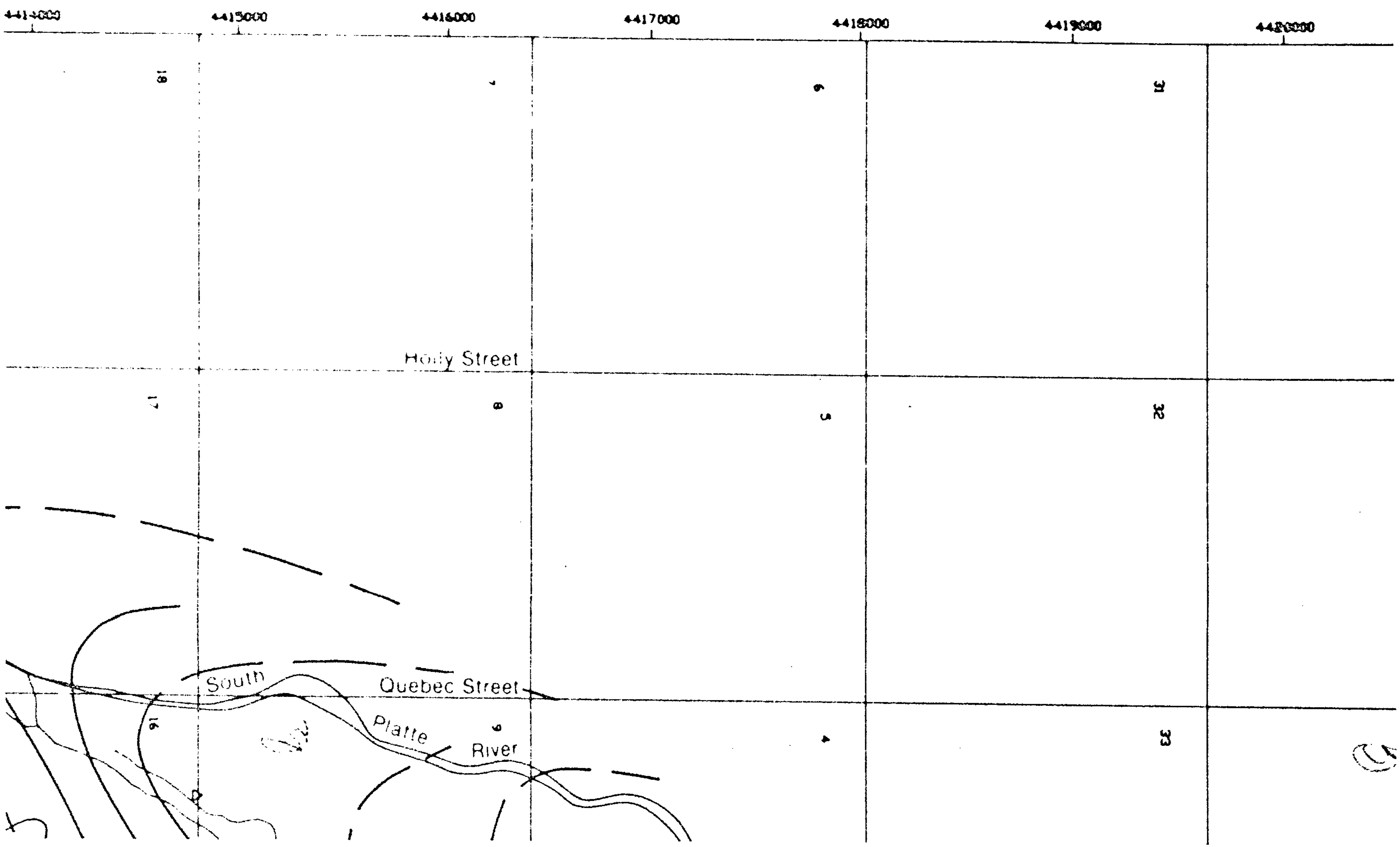

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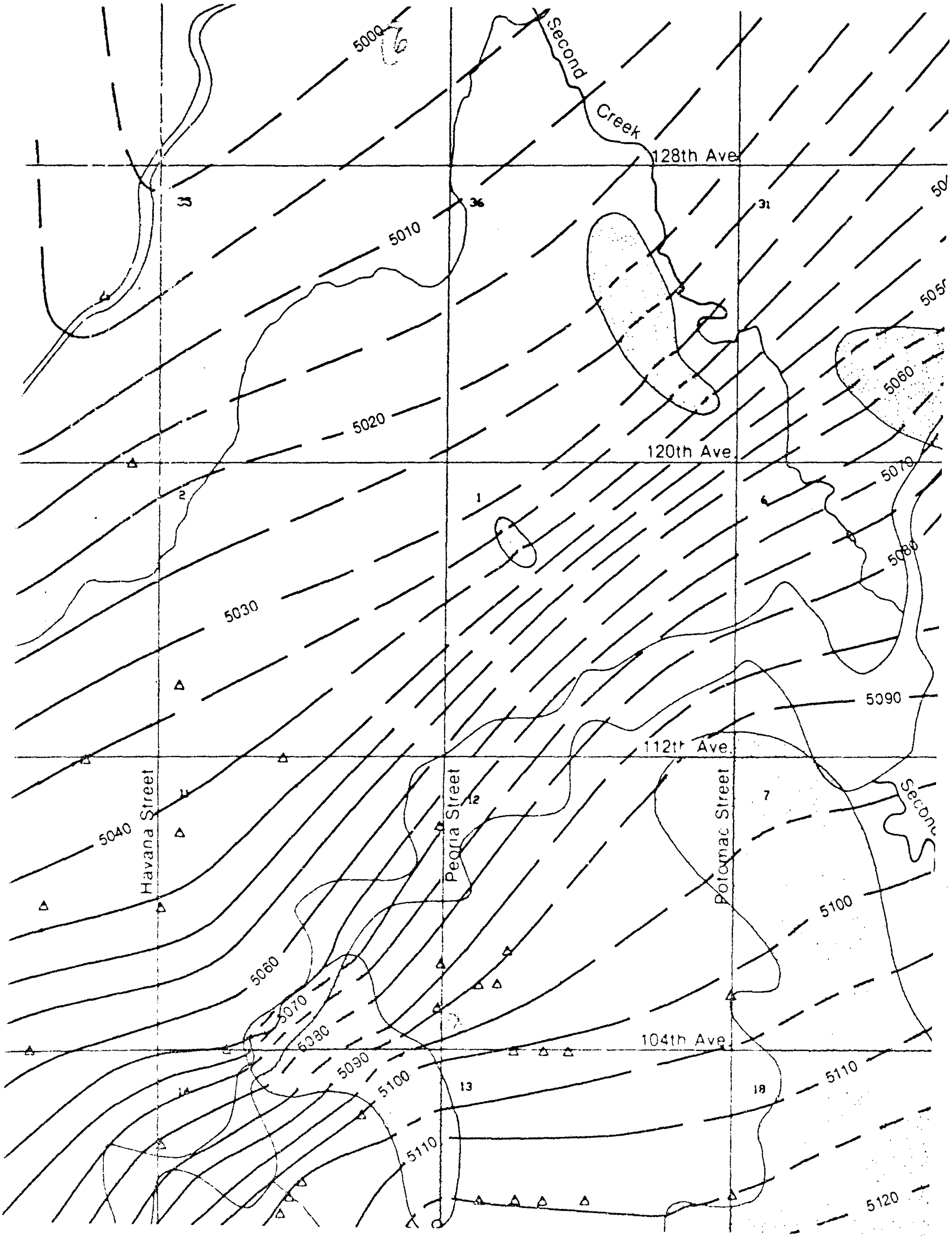

Second Creek
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120th Ave.
112th Ave.
104th Ave.
Havana Street
Peoria Street
Potomac Street
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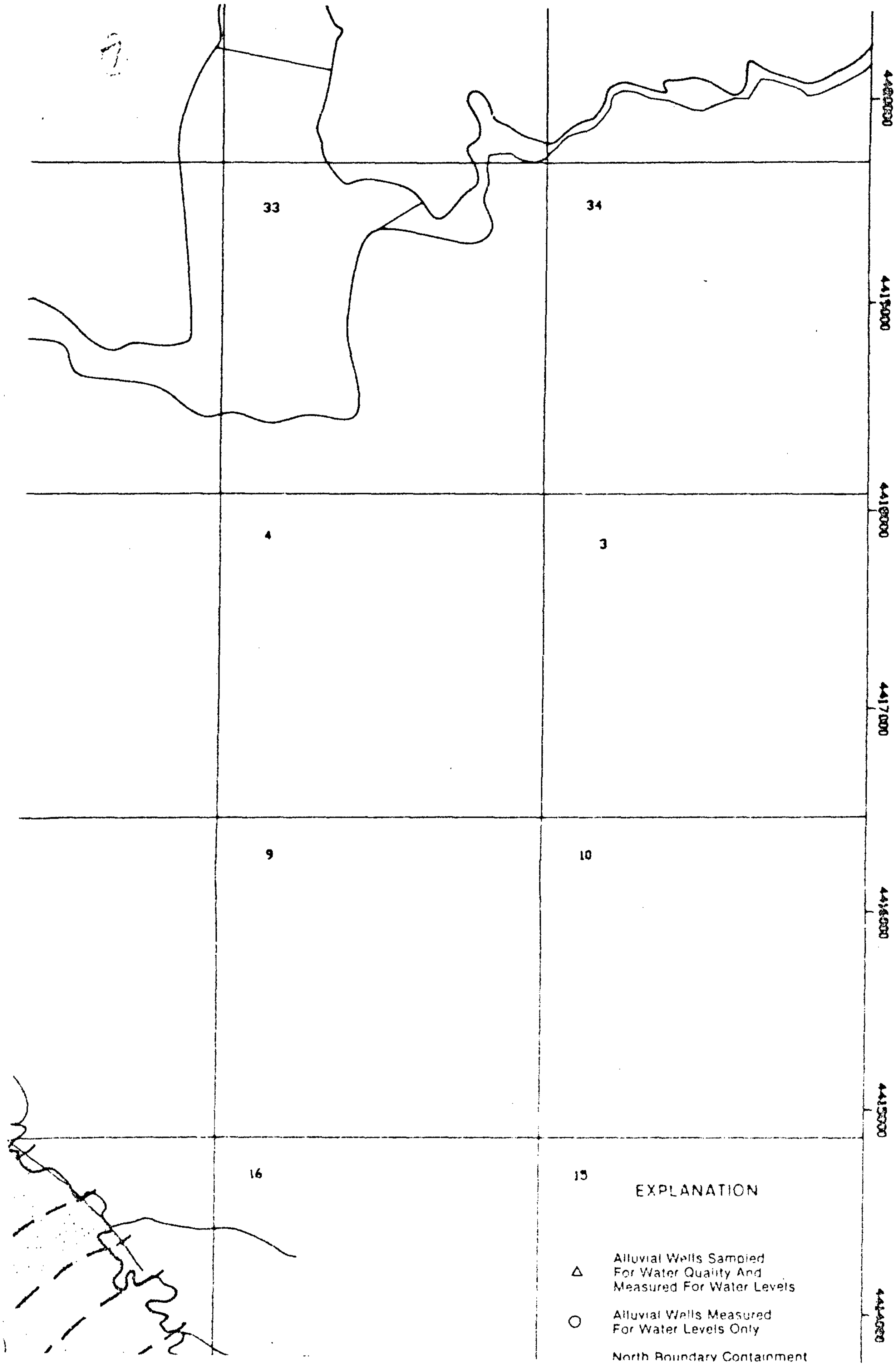
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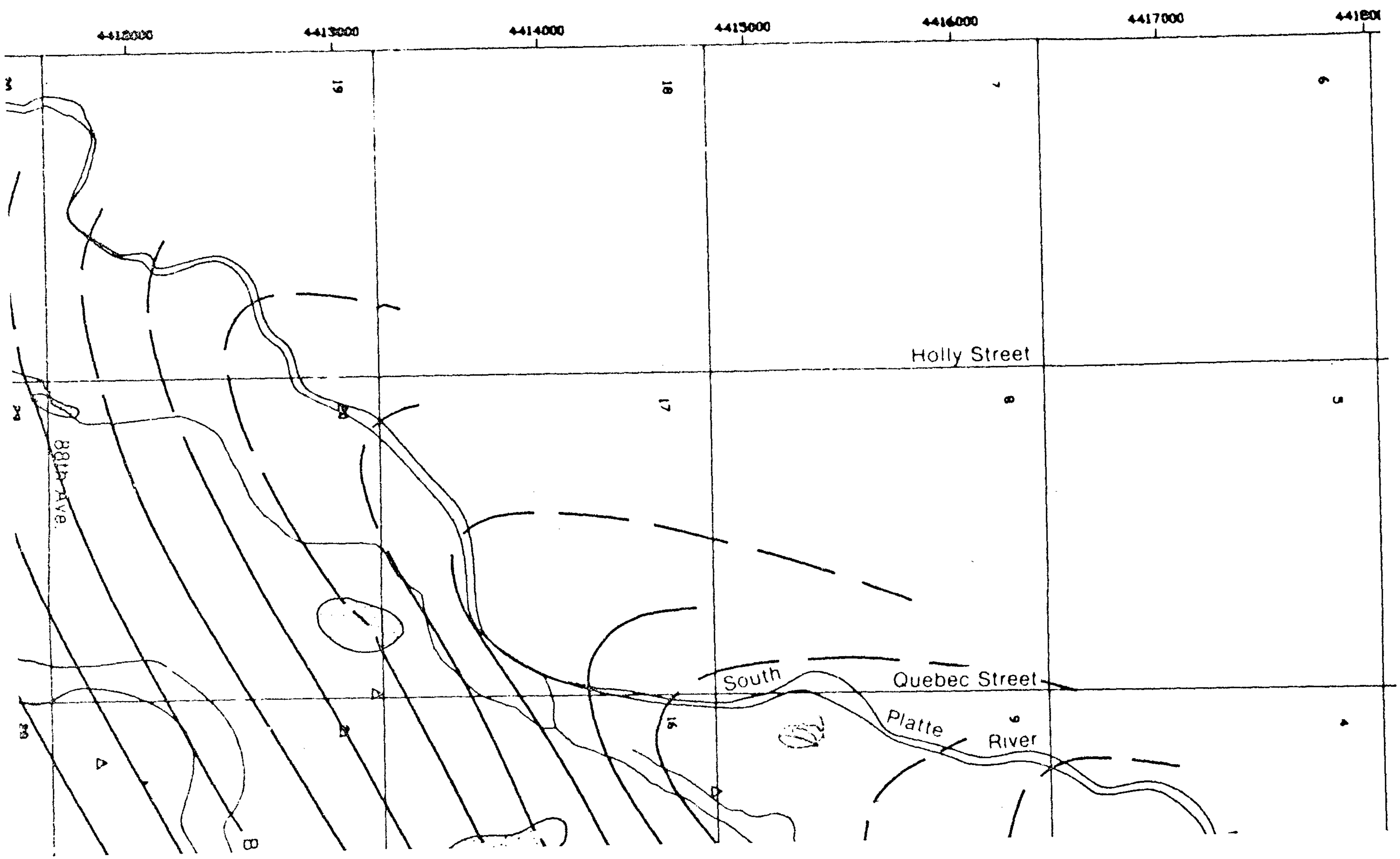
EXPLANATION
Alluvial Wells Sampled For Water Quality And Measured For Water Levels
Alluvial Wells Measured For Water Levels Only
North Boundary Containment



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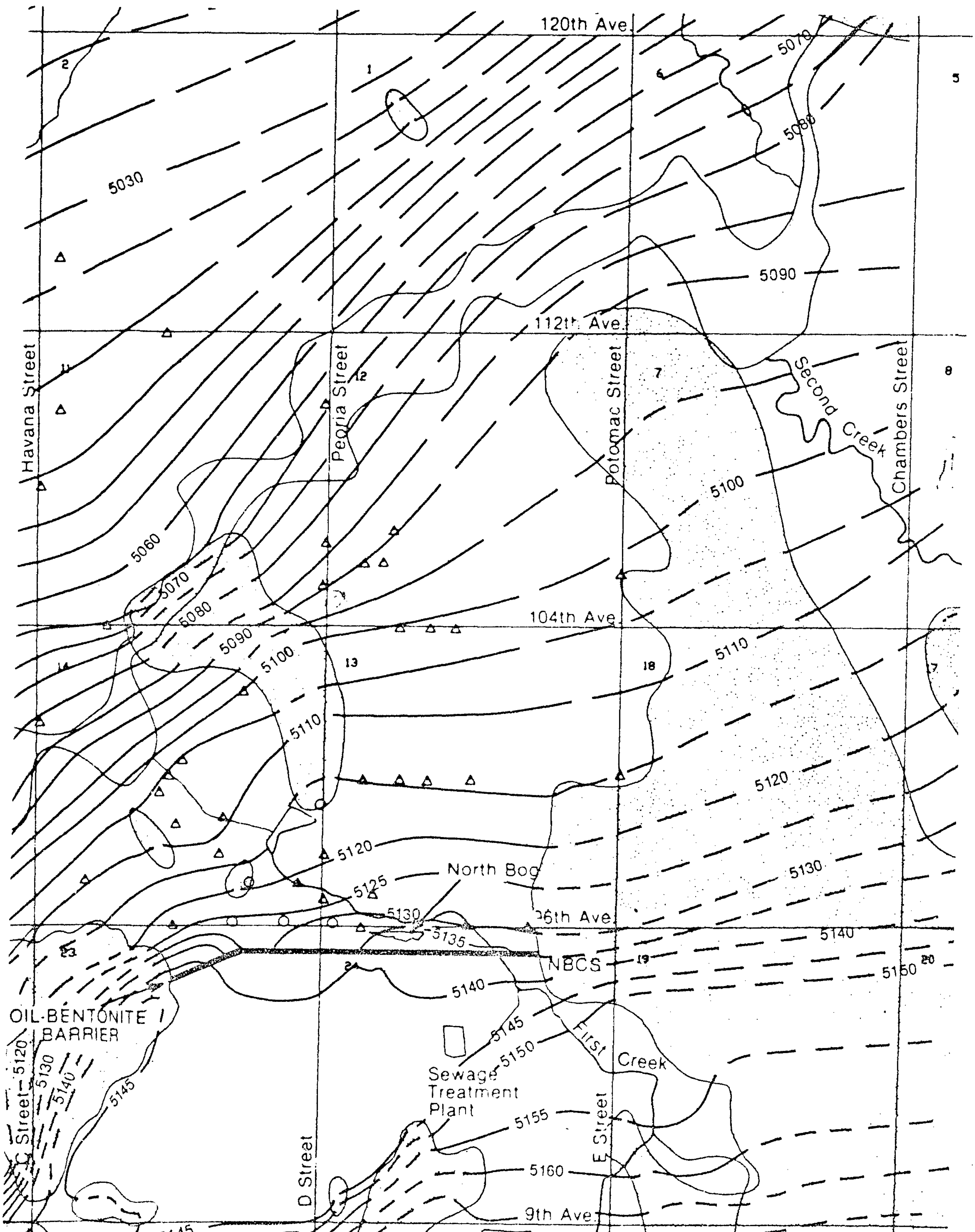

120th Ave.
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112th Ave.
Havana Street
Peoria Street
Potomac Street
Second Creek
Chambers Street
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Sewage Treatment Plant
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9th Ave.
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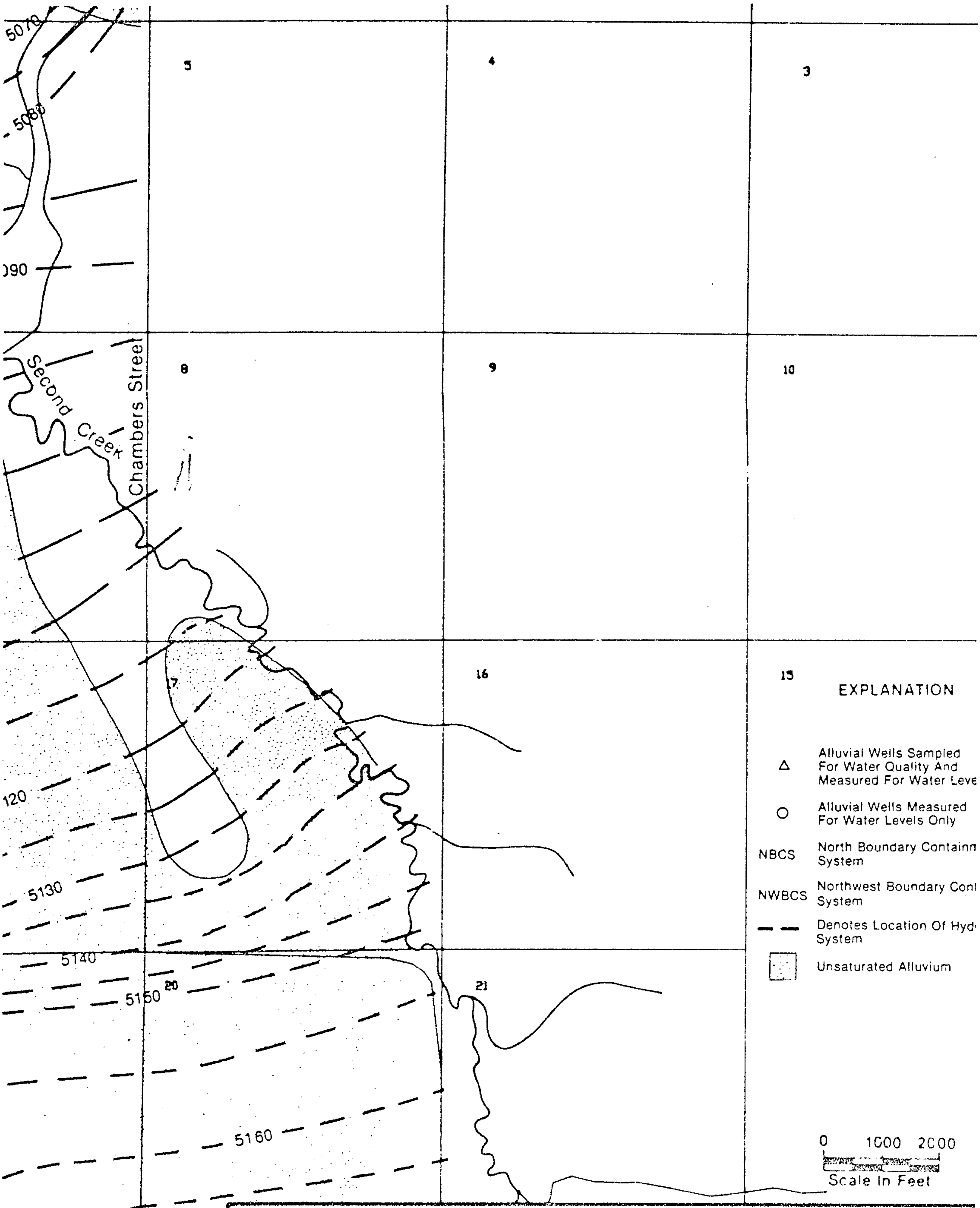
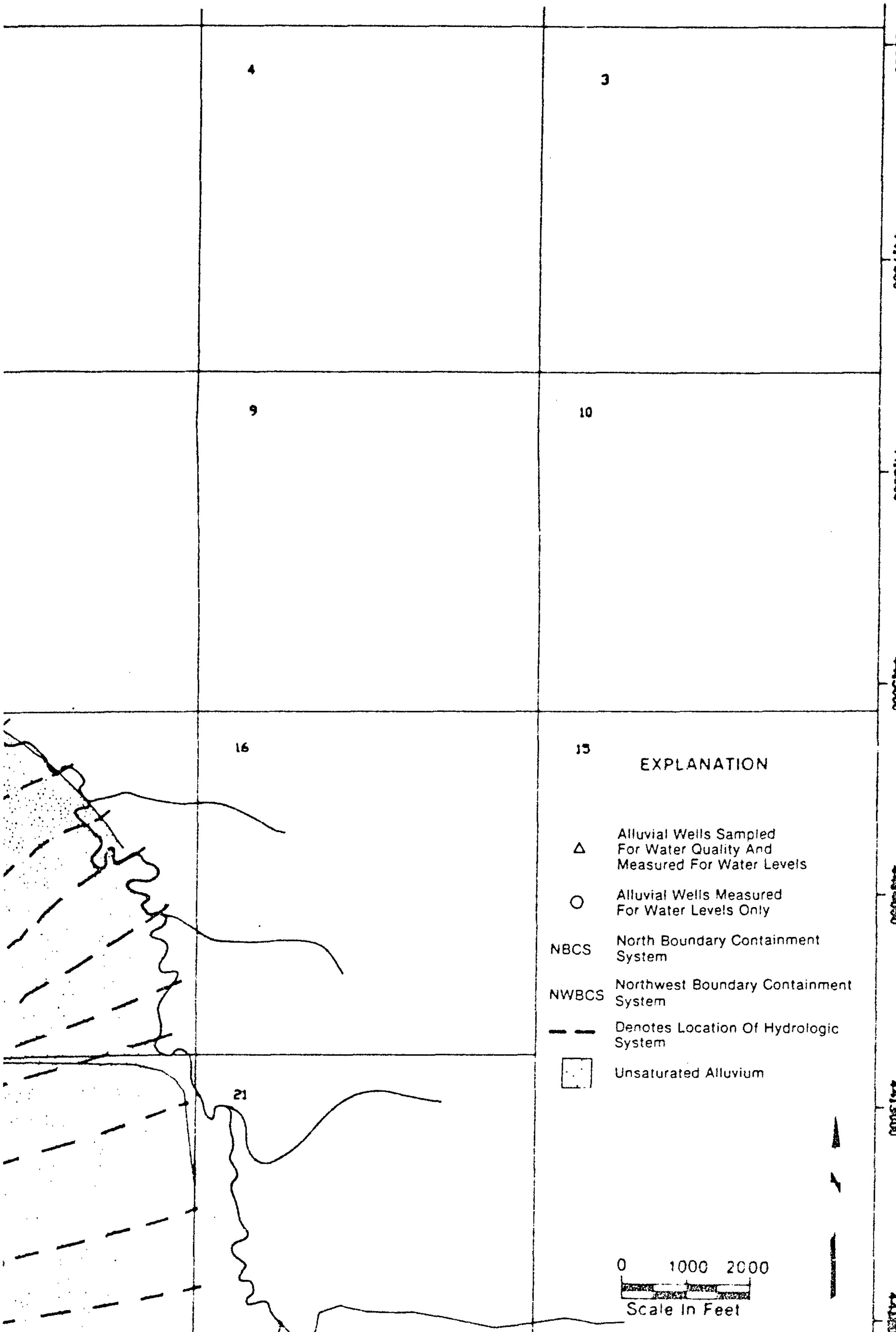


Figure E-10
WATER TABLE ELEVATION MAP SPRING, 1987

SOURCE ESE 1988



ɡure E-10
ATER TABLE ELEVATION MAP SPRING, 1987

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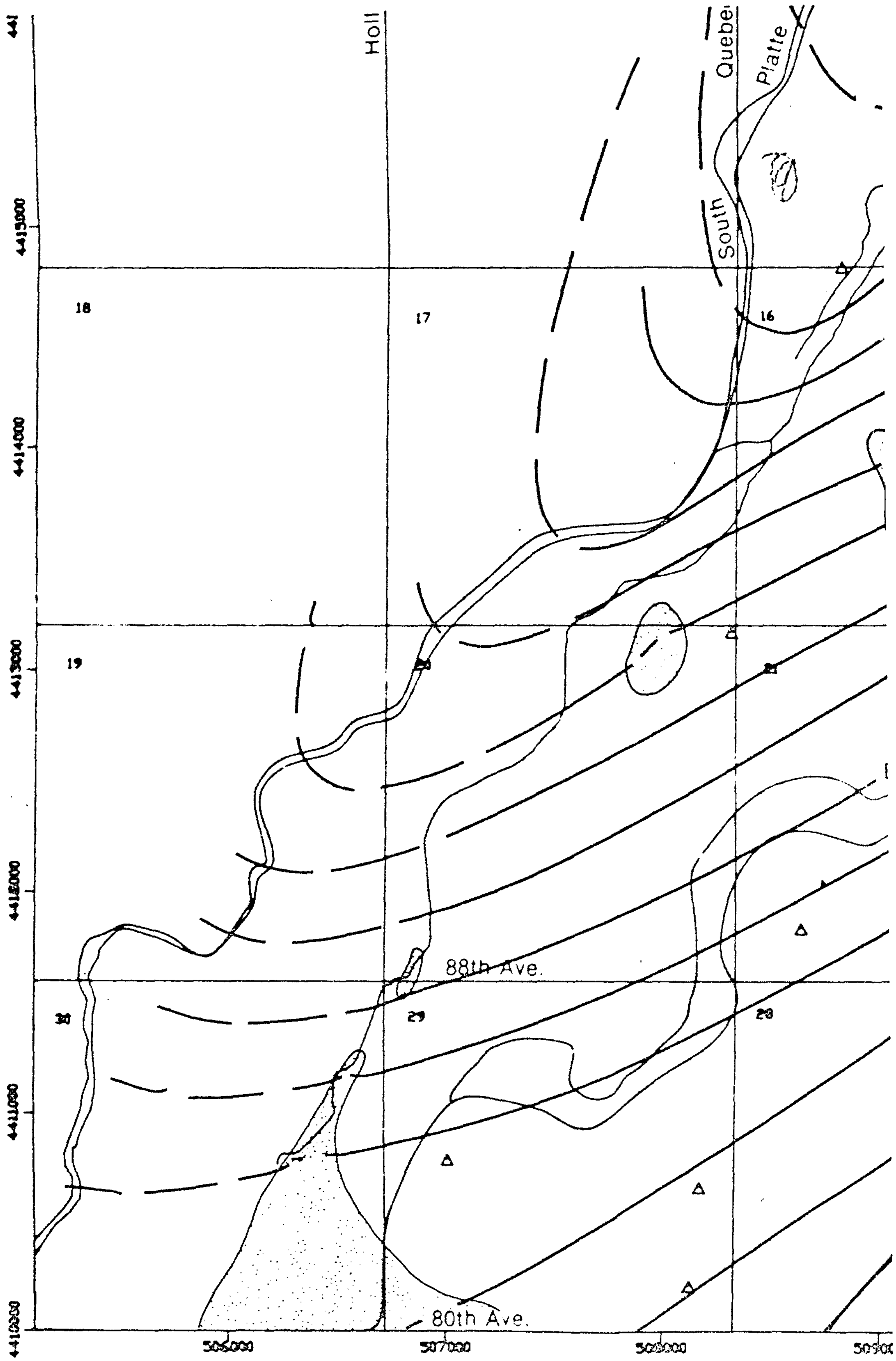

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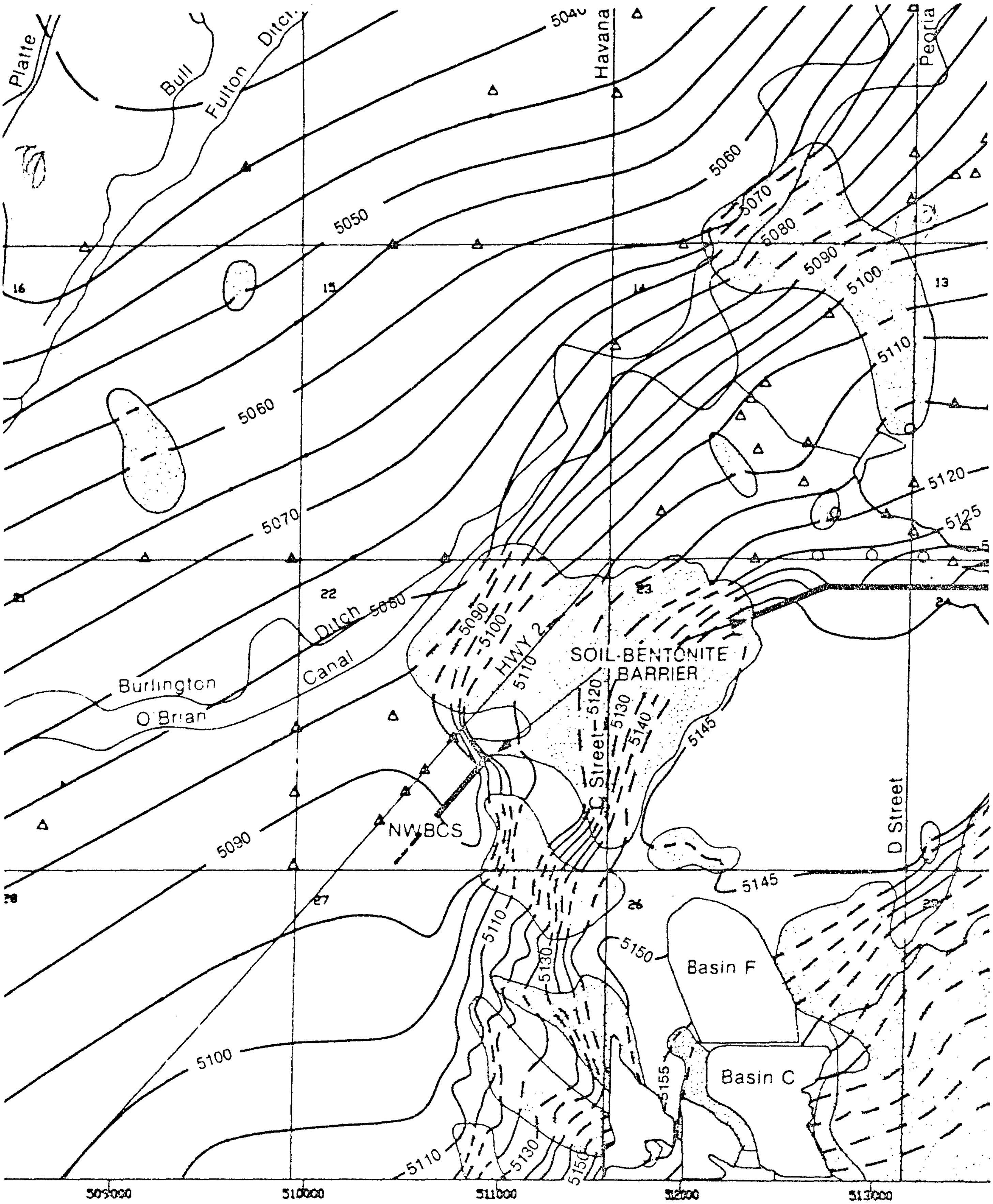

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Fulton Ditch
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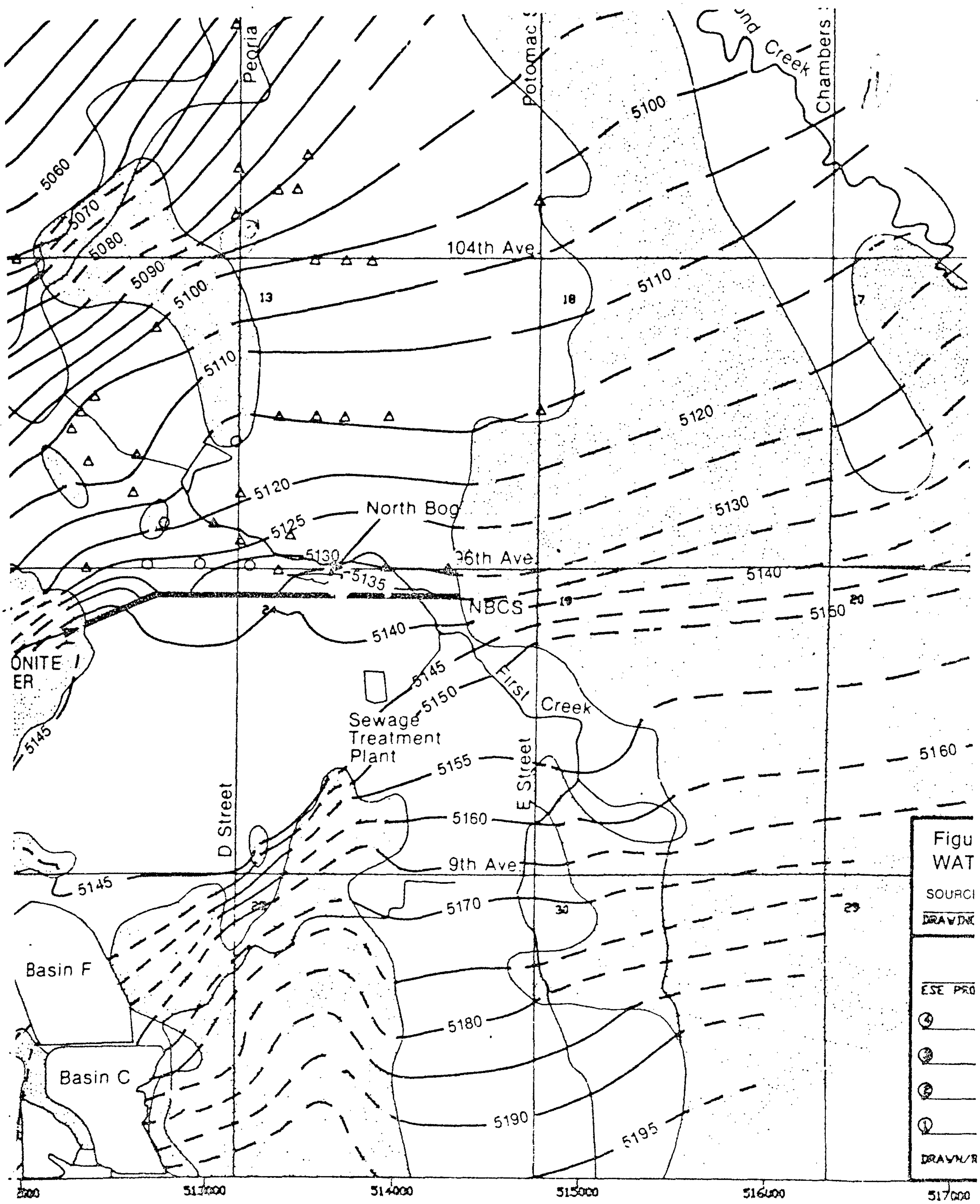
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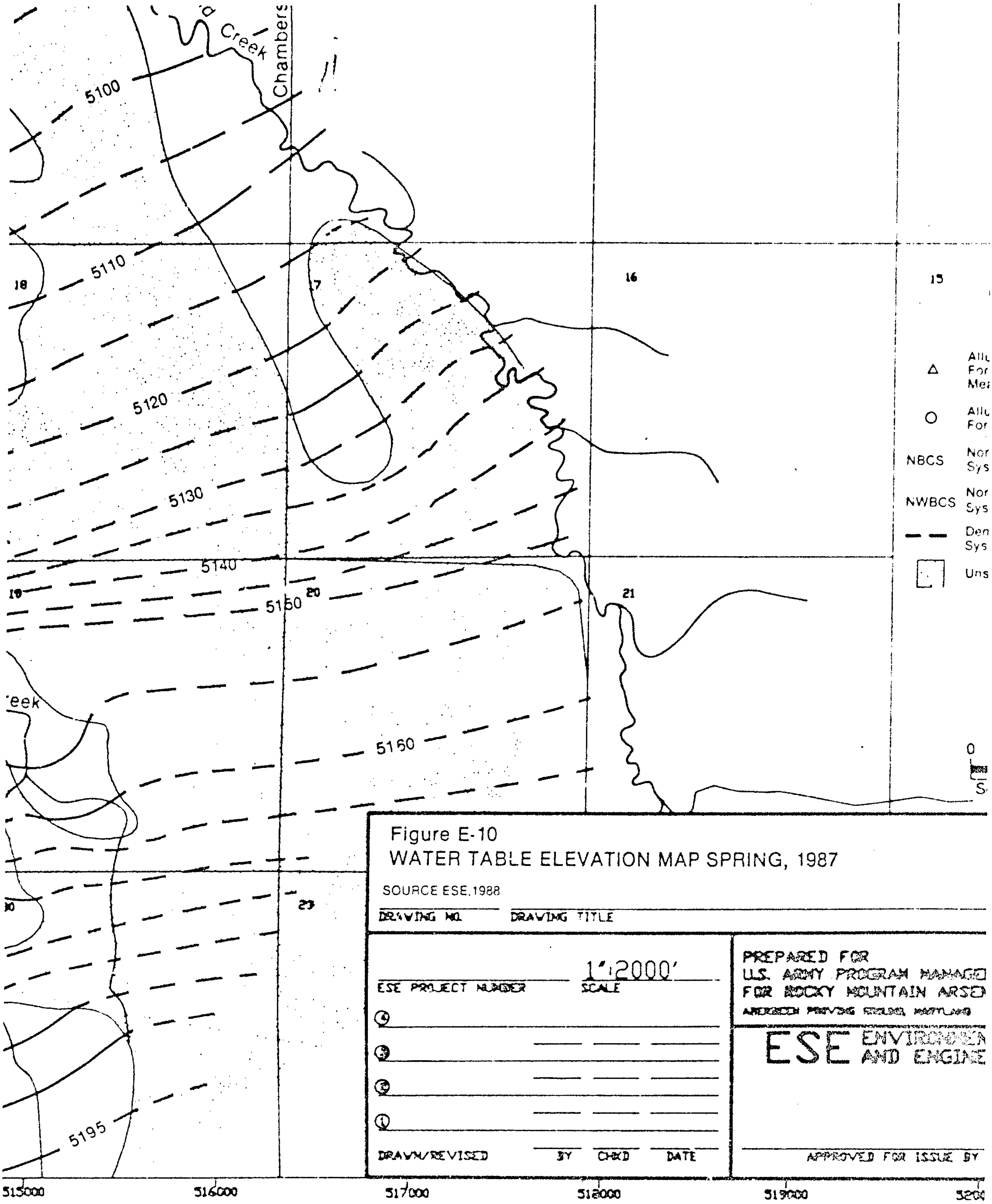

Figure E-10
WATER TABLE ELEVATION MAP SPRING, 1987

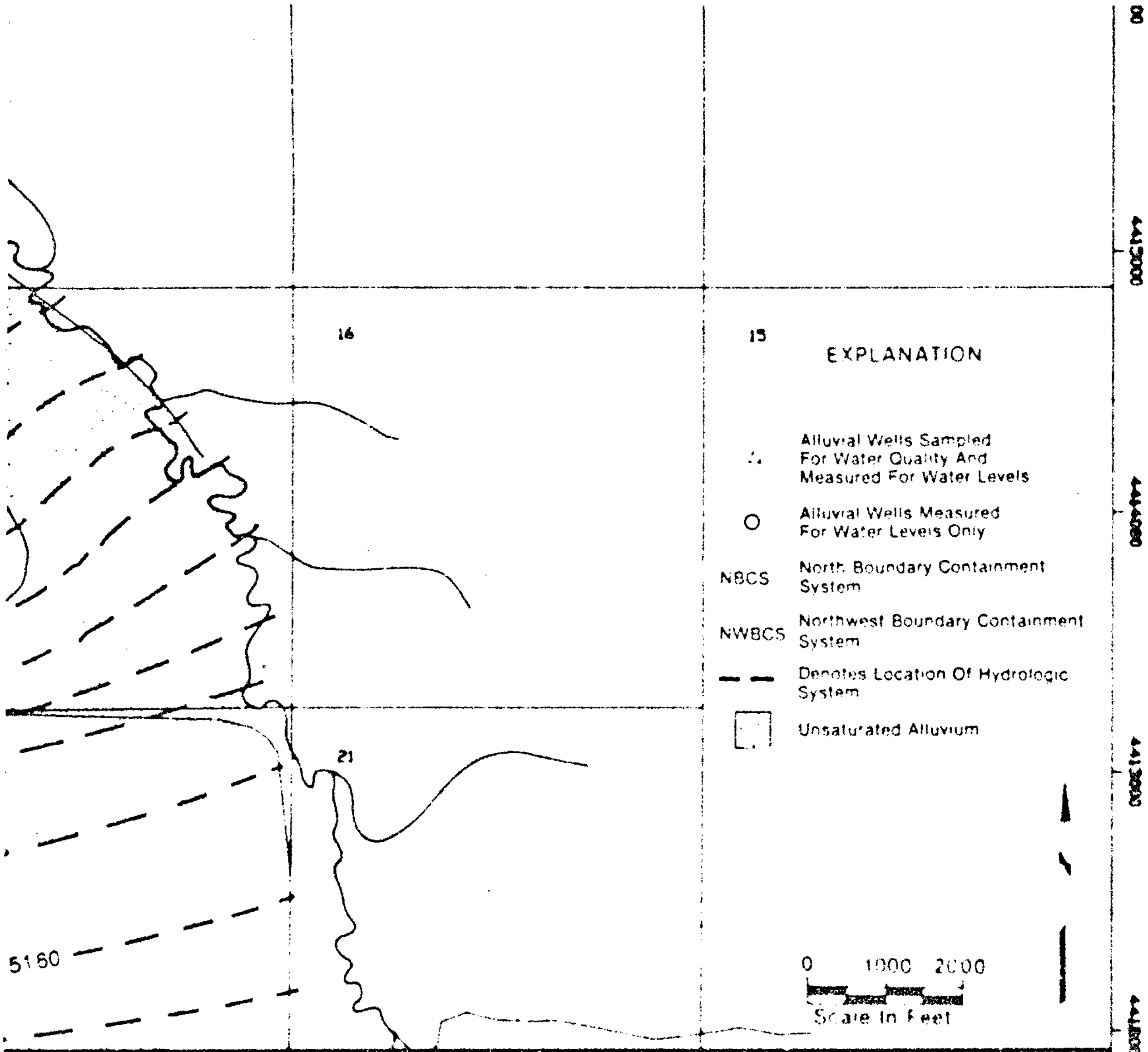

Figure E-10
WATER TABLE ELEVATION MAP SPRING, 1987

SOURCE ESE 1988

DRAWING NO. DRAWING TITLE

ESE PROJECT NUMBER

SCALE 1" 2000'

DRAWN/REVISED BY CHKD DATE

PREPARED FOR
U.S. ARMY PROGRAM MANAGER'S OFFICE
FOR ROCKY MOUNTAIN ARSENAL
ABERDEEN PROVING GROUND, MARYLAND

ESE ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.

APPROVED FOR ISSUE BY DATE

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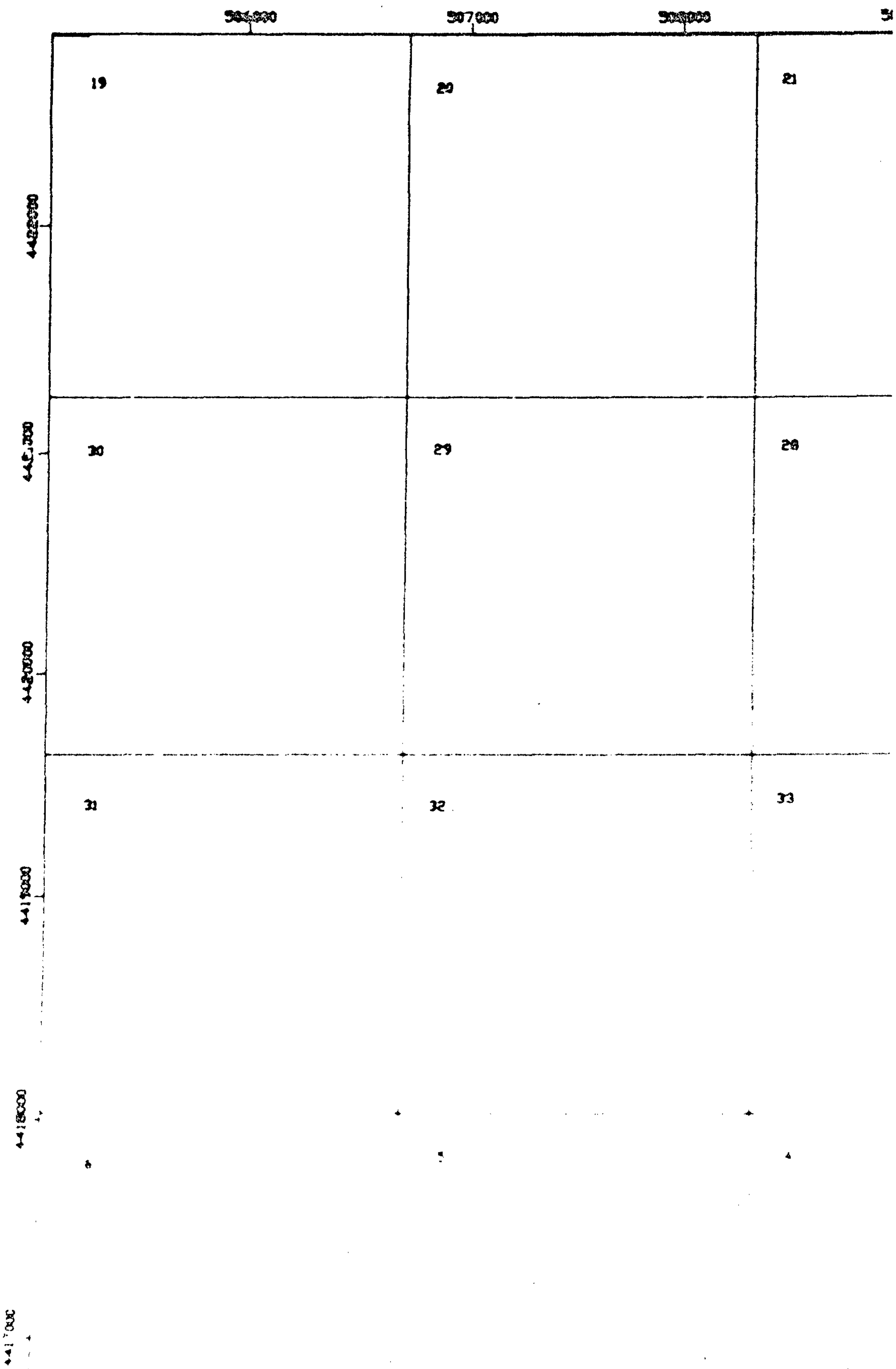
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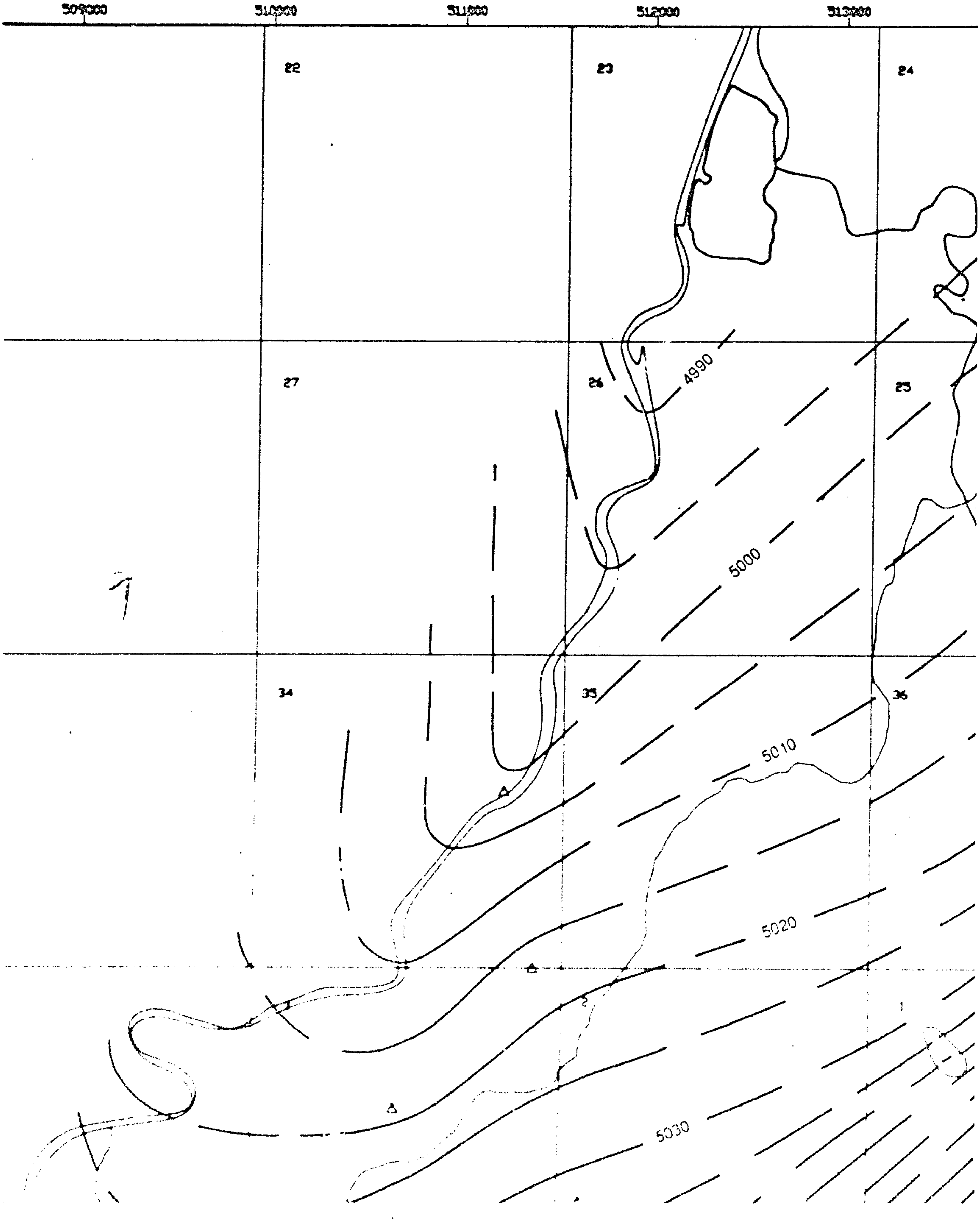

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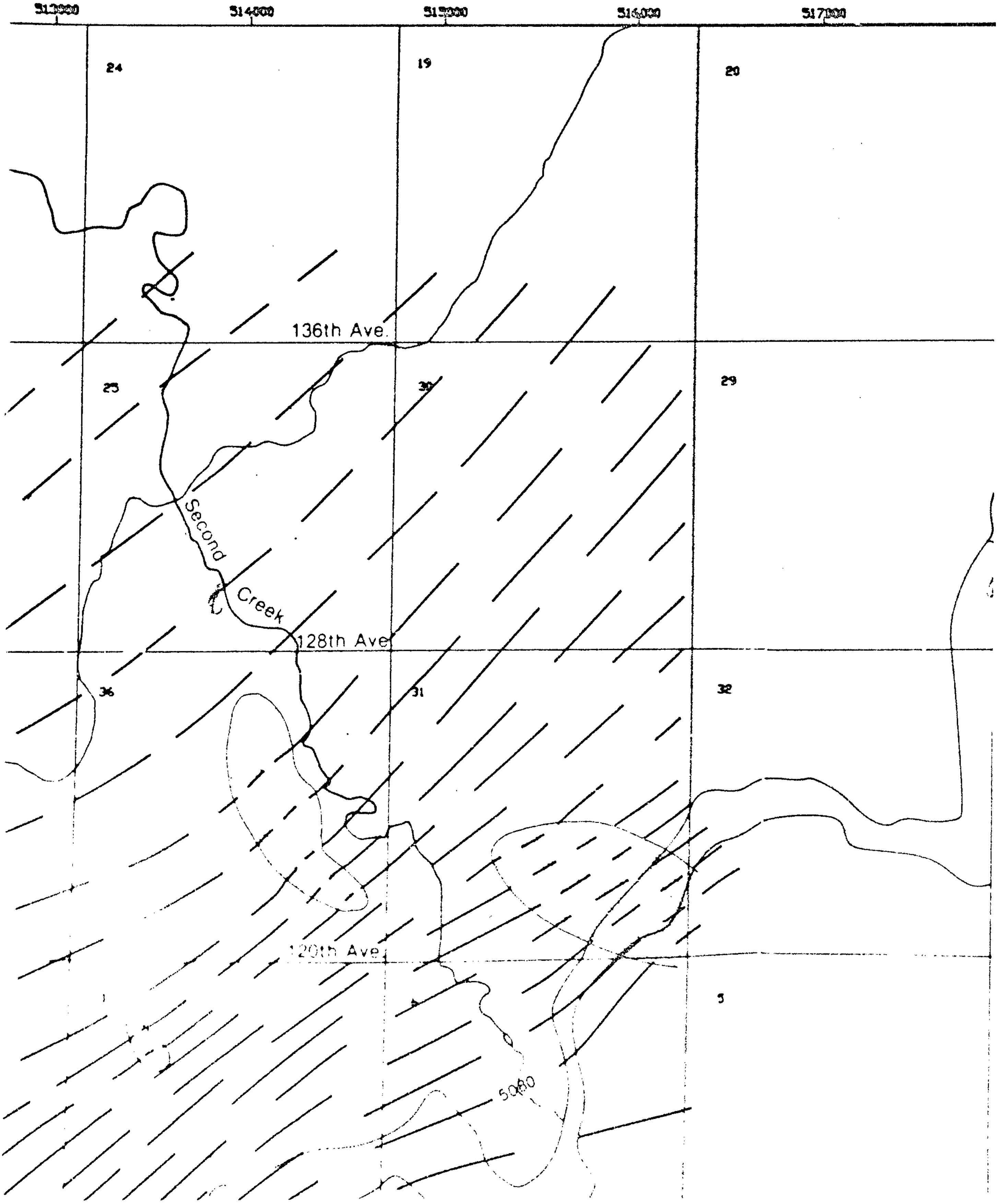

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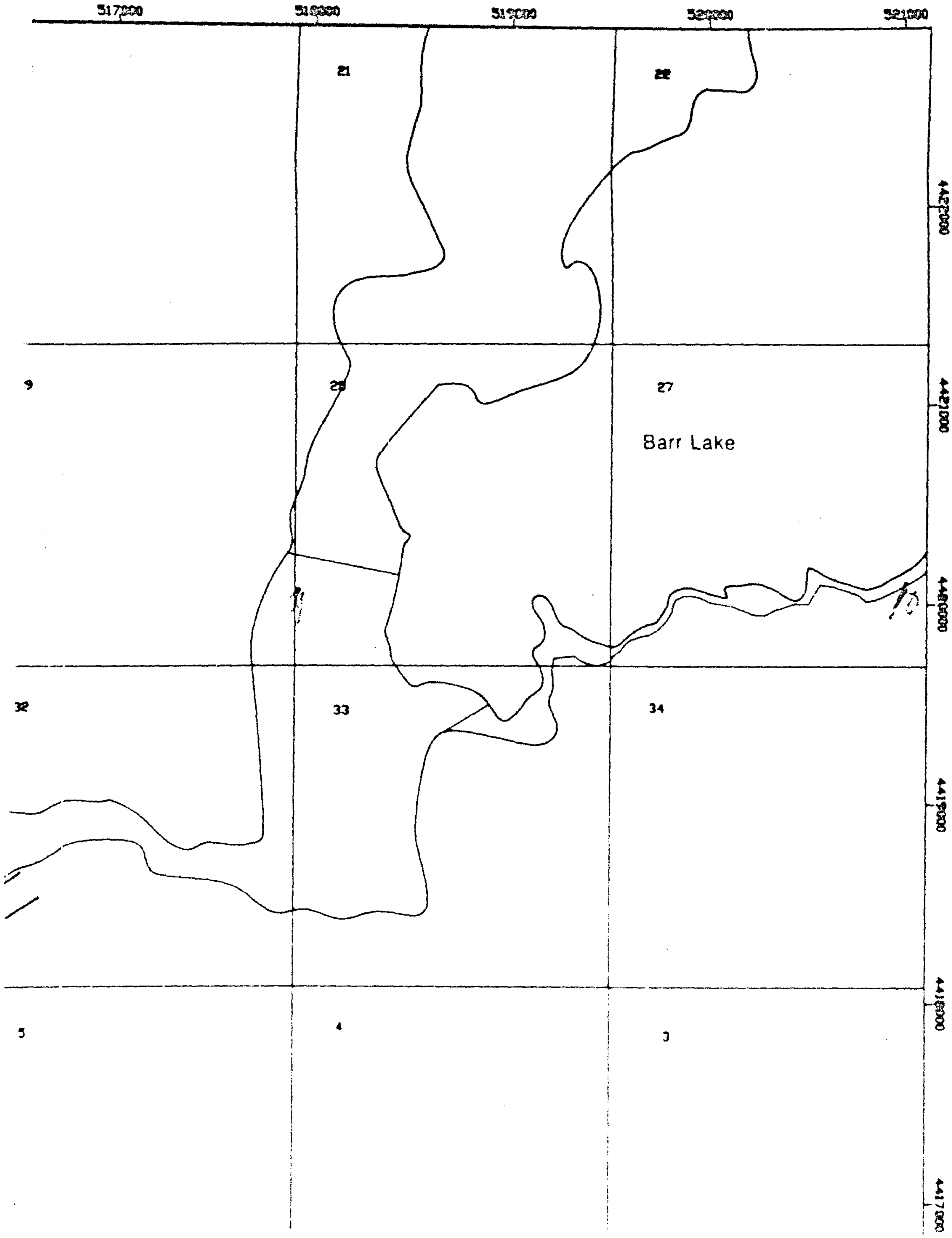

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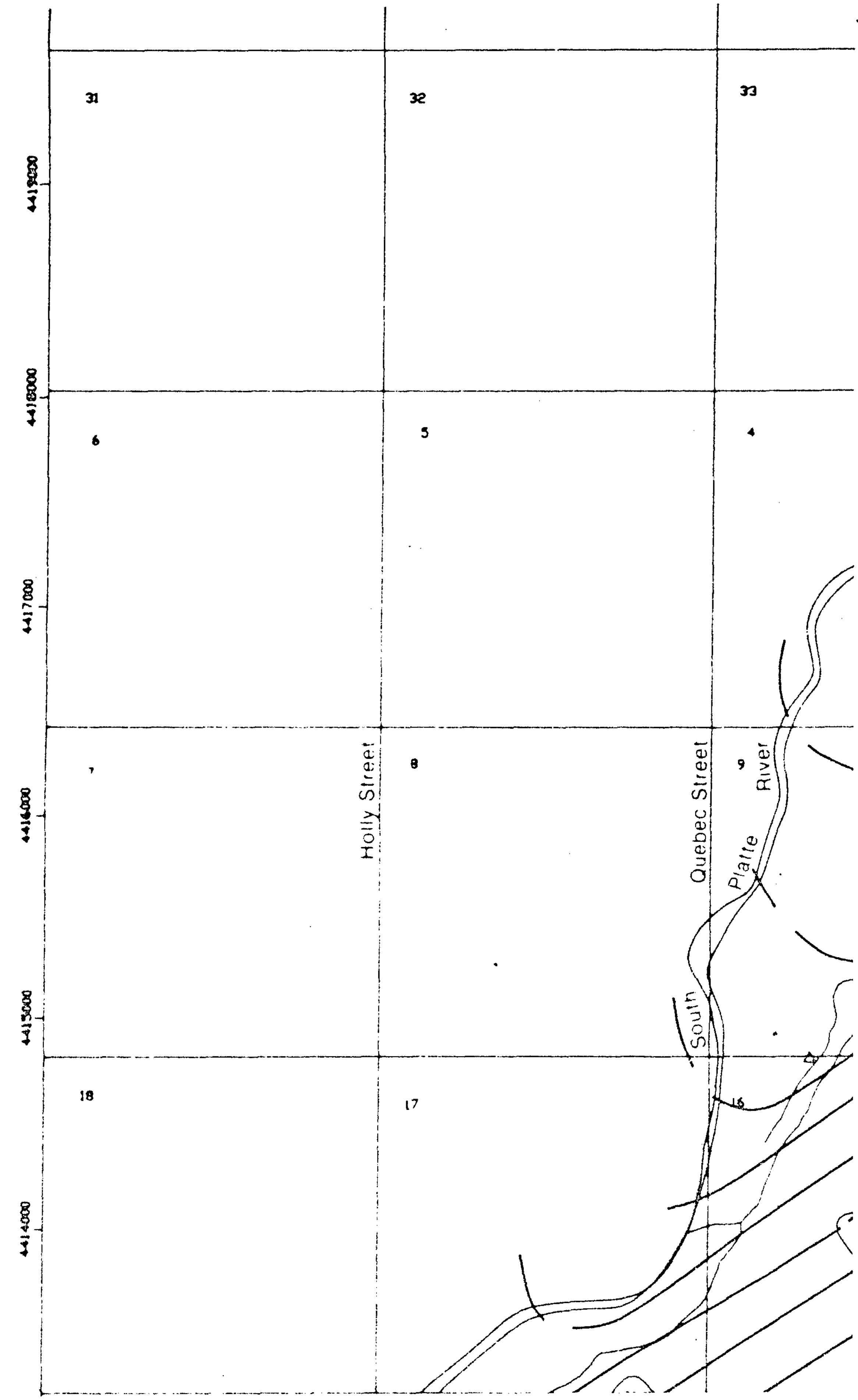
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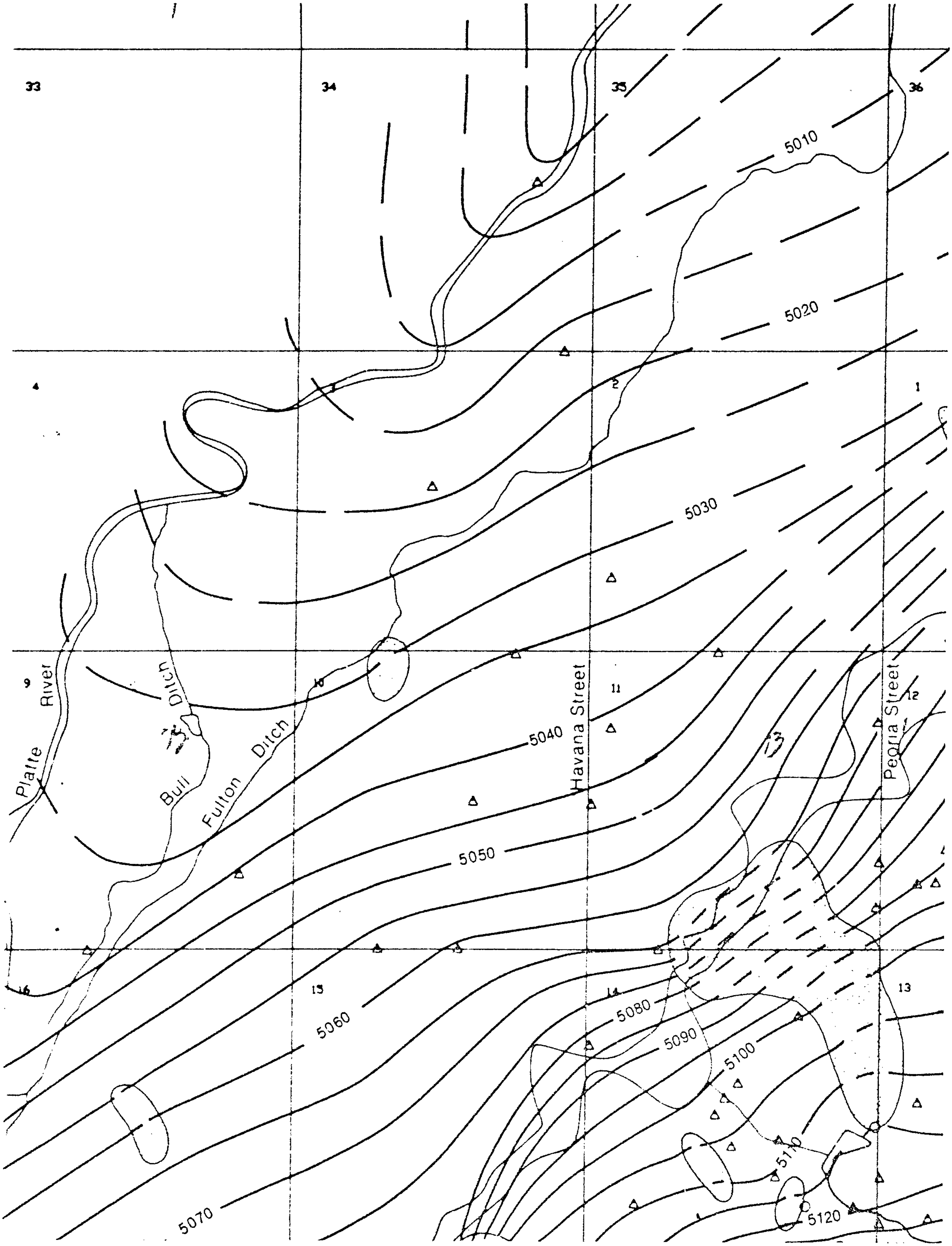
Quebec Street
South Platte River



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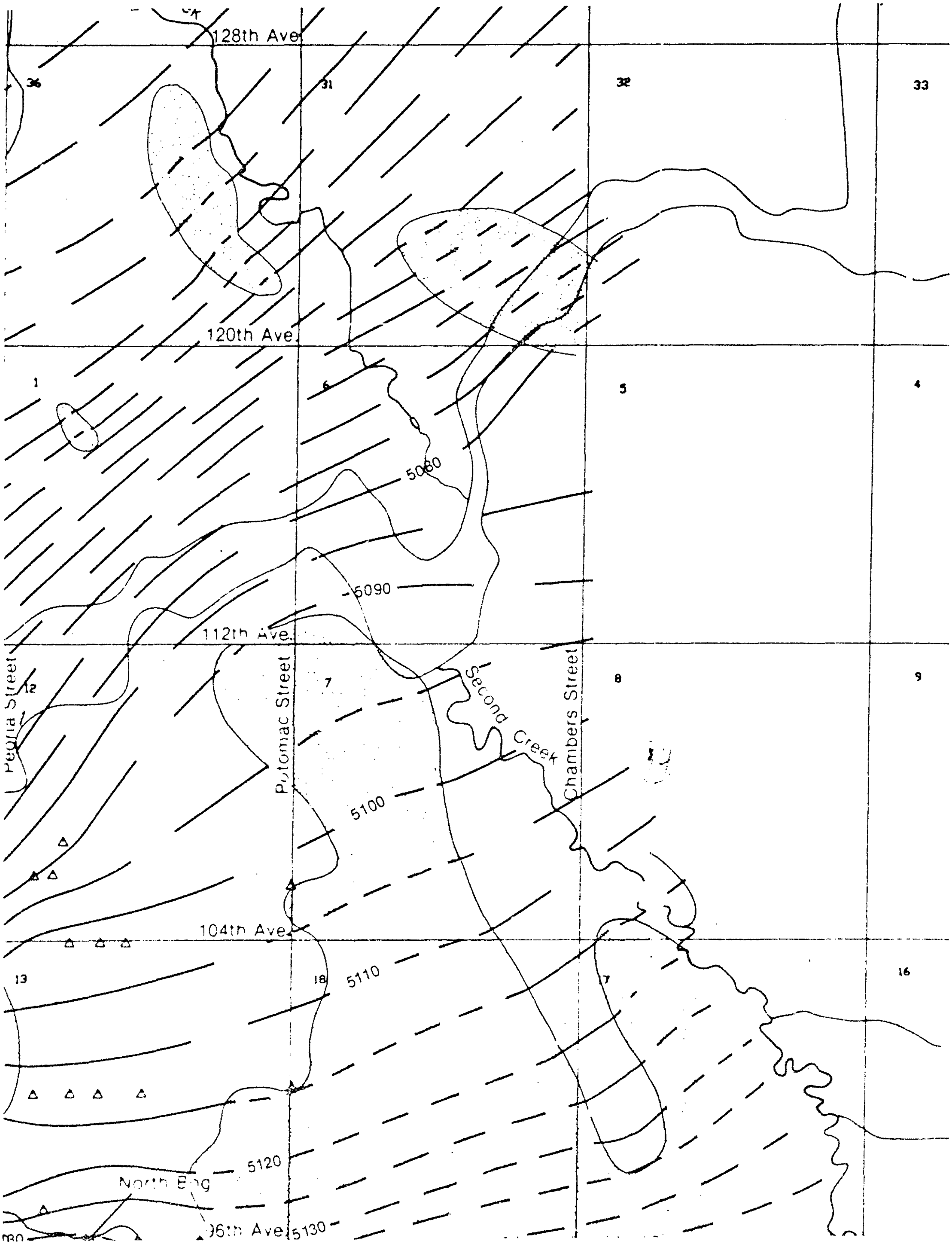

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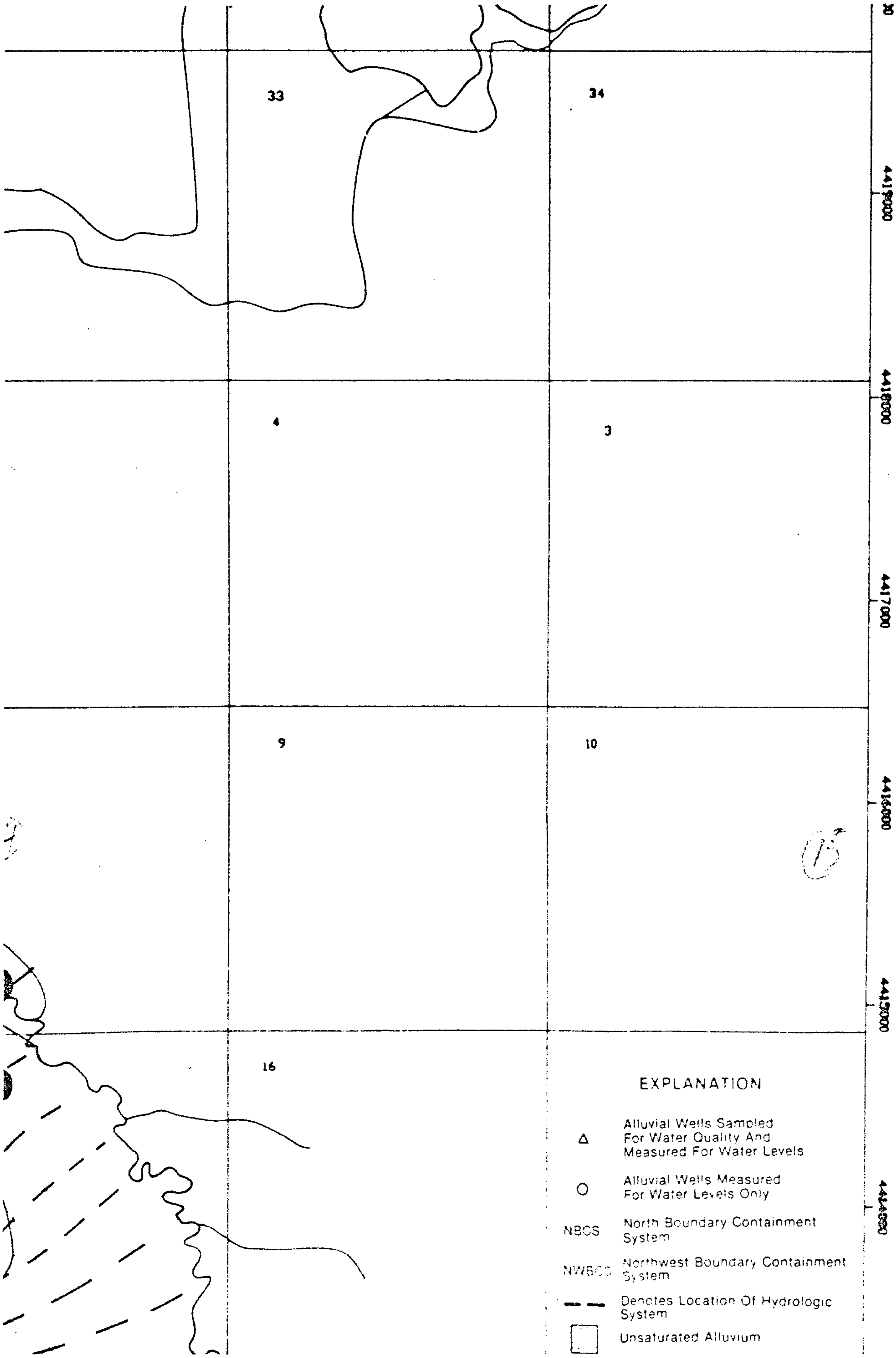
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EXPLANATION
Alluvial Wells Sampled For Water Quality And Measured For Water Levels
Alluvial Wells Measured For Water Levels Only
NBCS North Boundary Containment System
NWBCS Northwest Boundary Containment System
Denotes Location Of Hydrologic System
Unsaturated Alluvium

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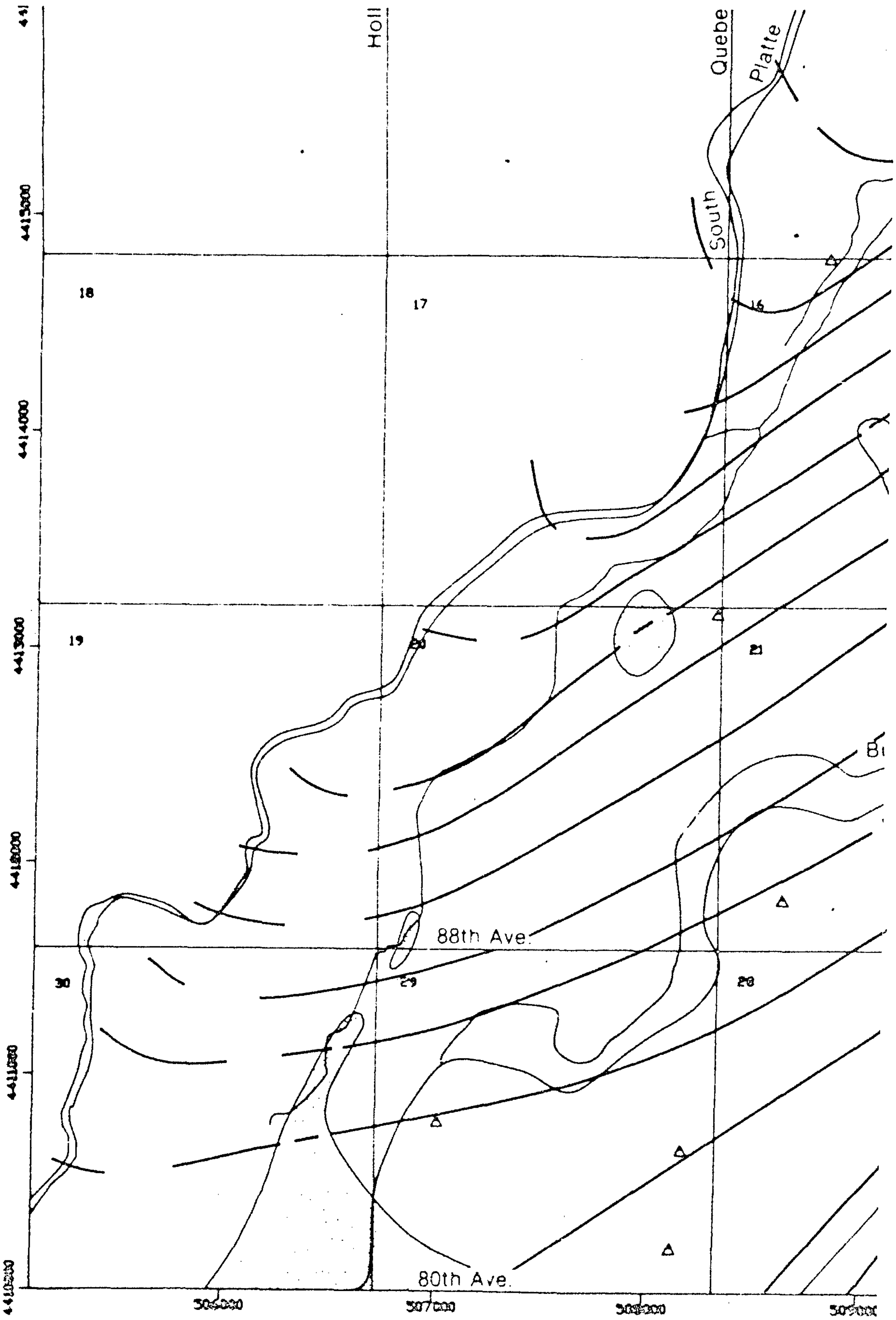
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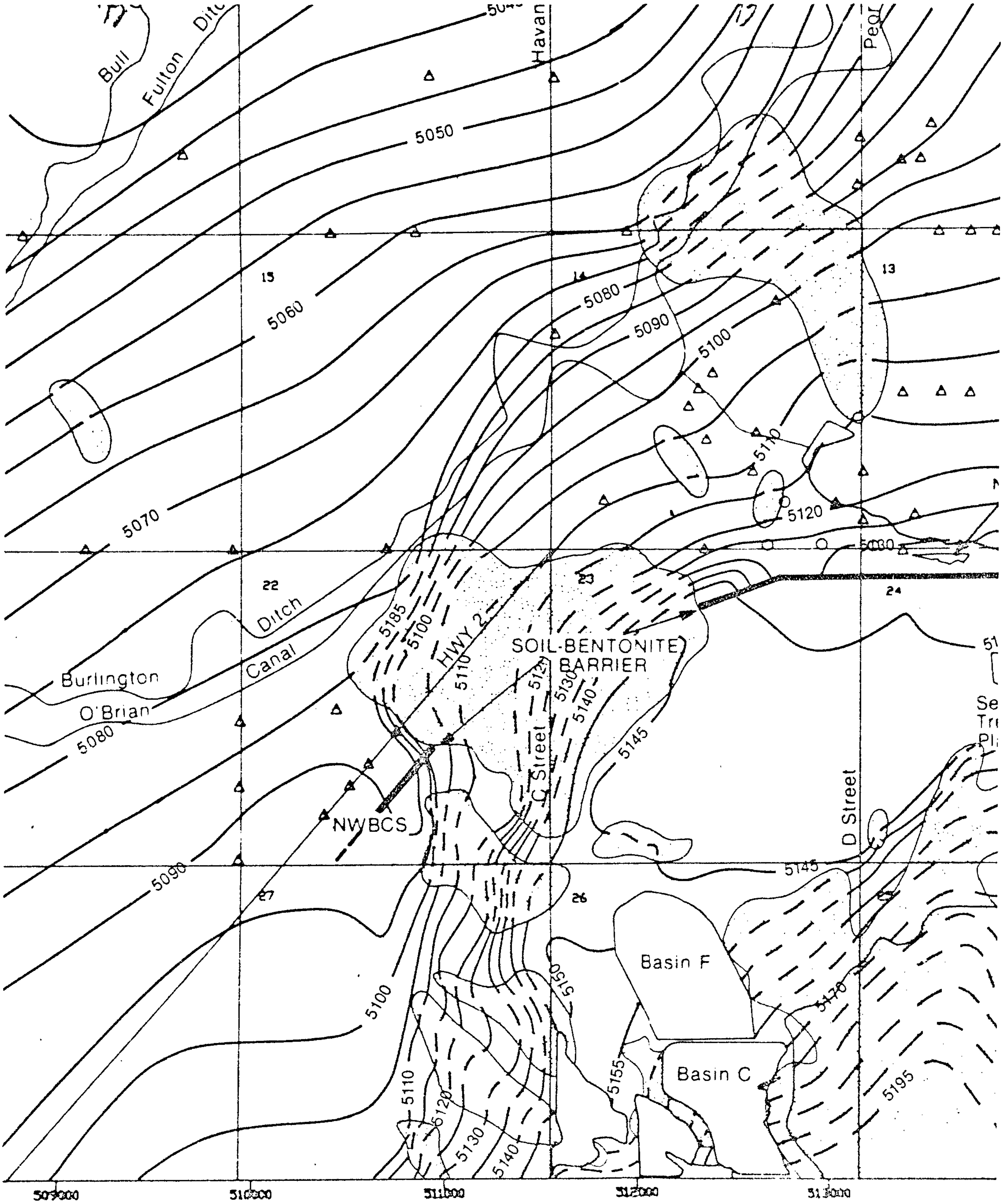

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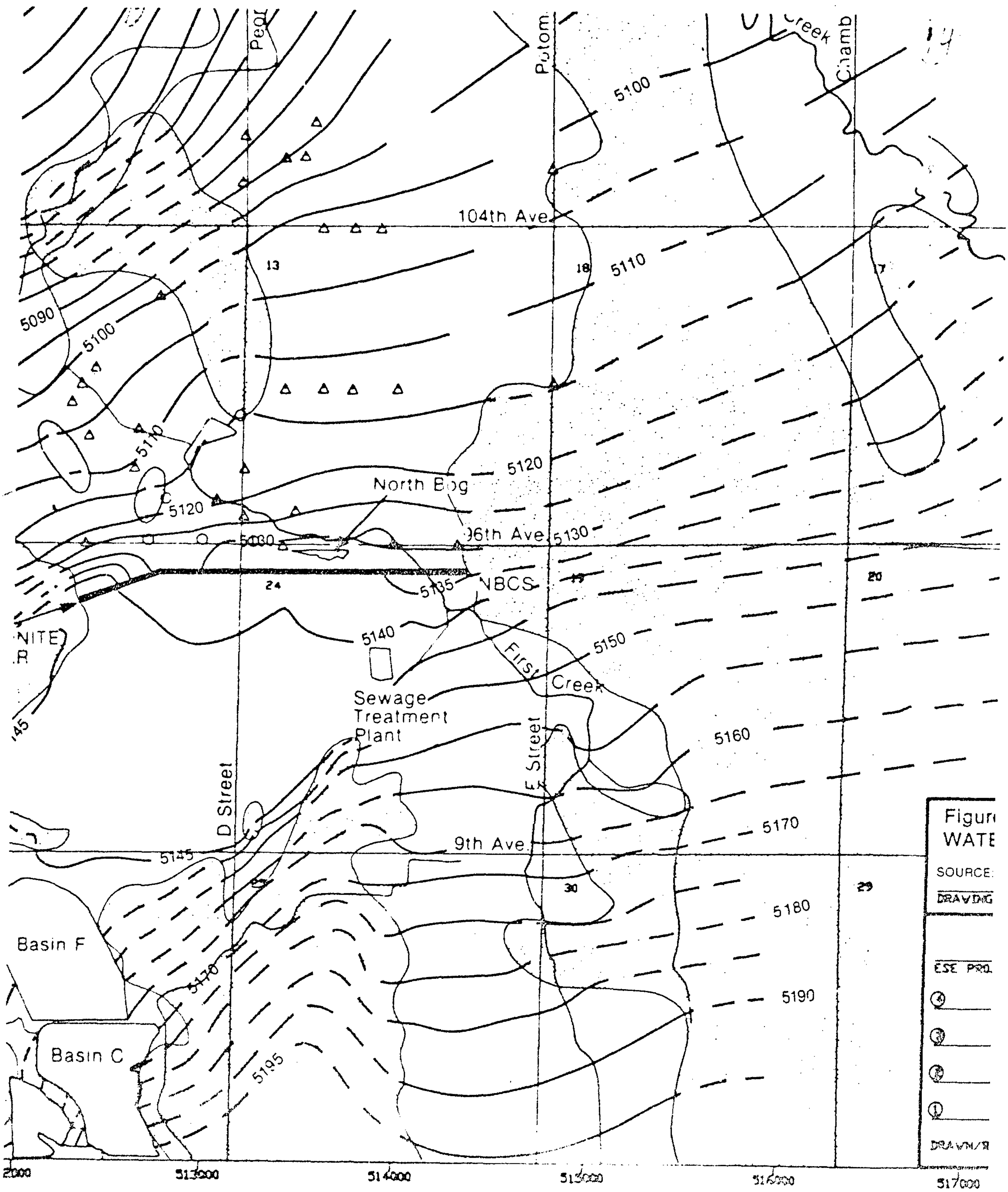

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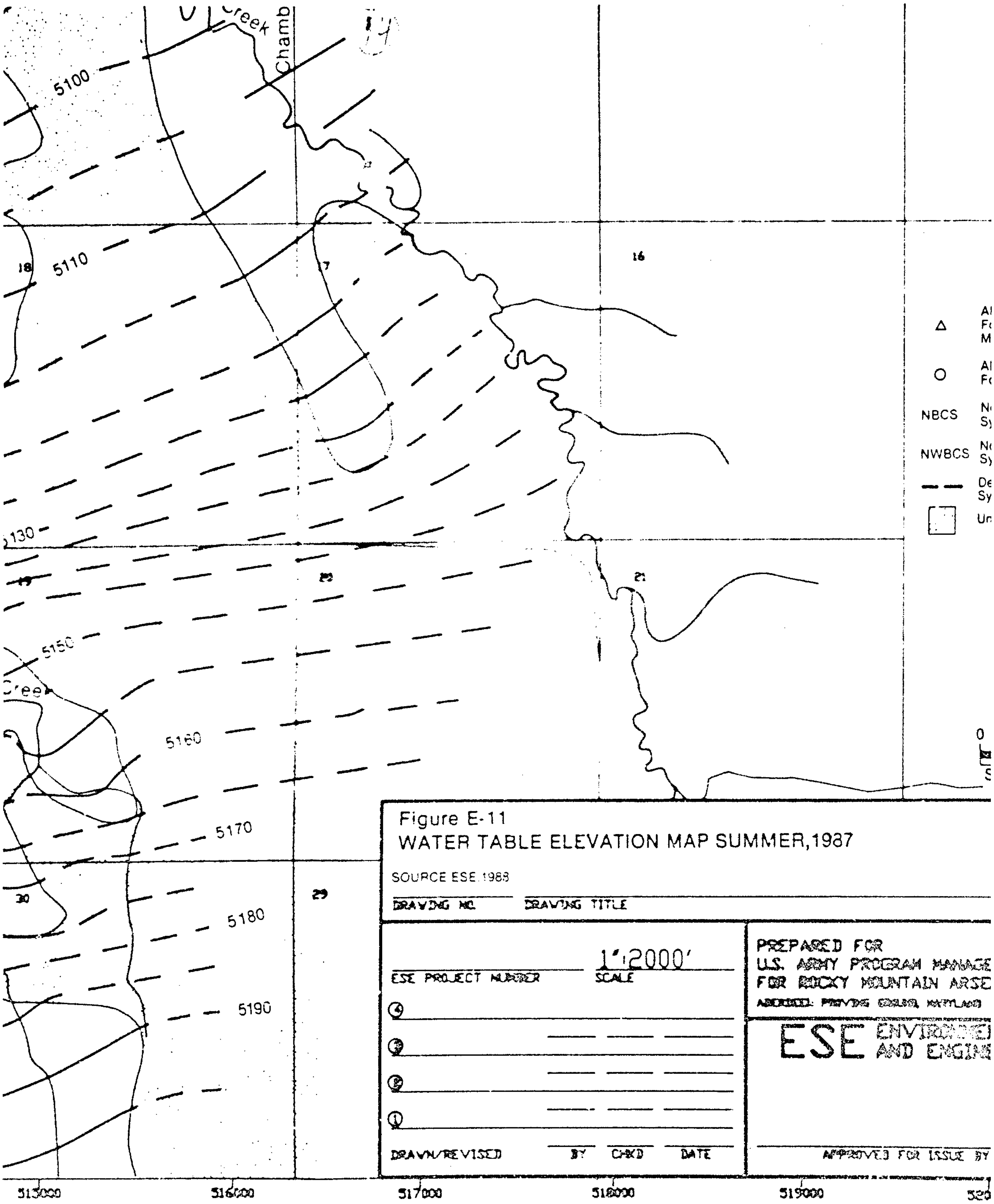

Figure E-11
WATER TABLE ELEVATION MAP SUMMER, 1987

SOURCE ESE 1988

DRAWING NO. DRAWING TITLE

ESE PROJECT NUMBER

1"=2000'
SCALE

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FOR ROCKY MOUNTAIN ARSE
ABERDEEN PROVING GROUND, MARYLAND

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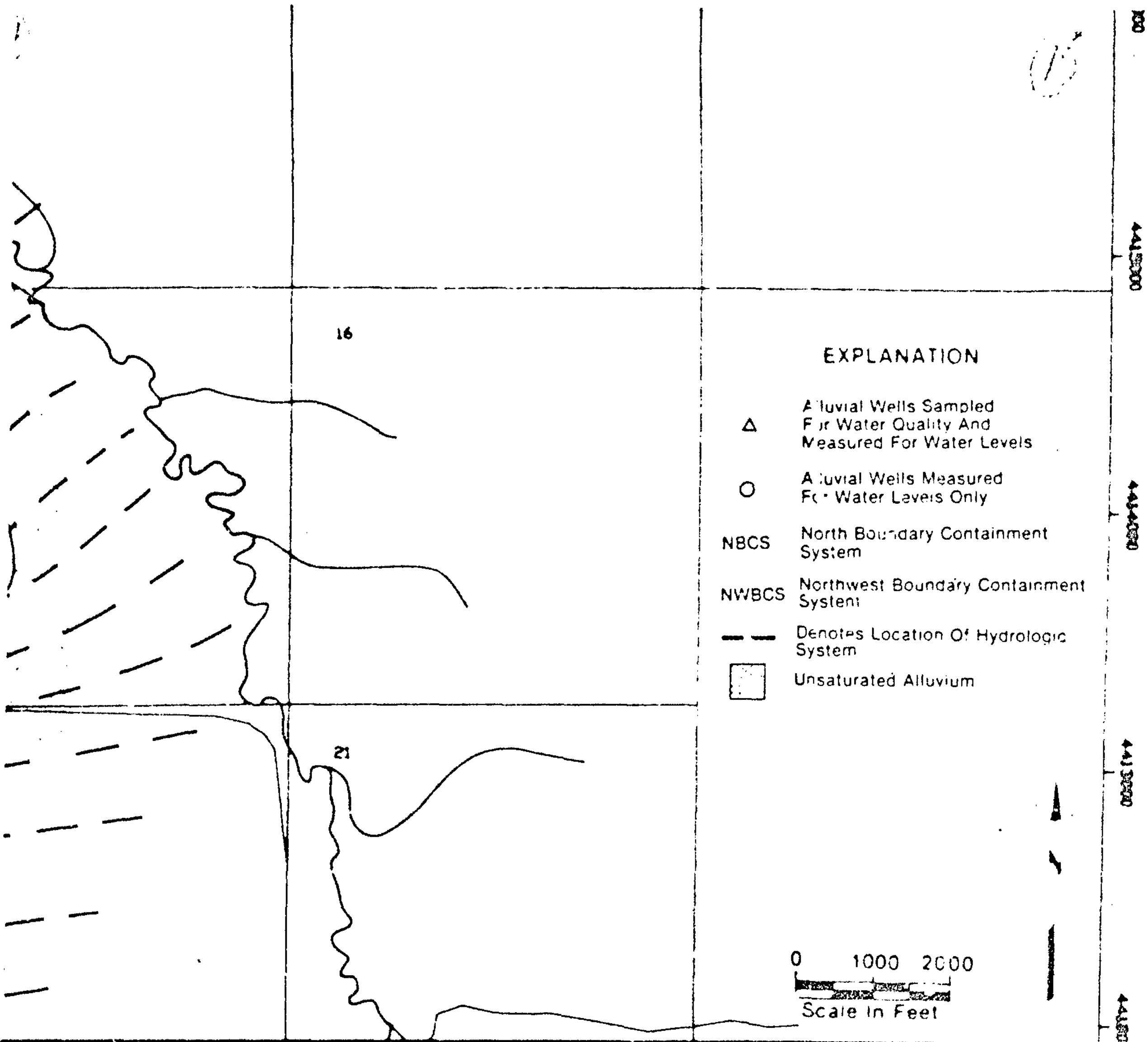

Figure E-11
WATER TABLE ELEVATION MAP SUMMER, 1987

SOURCE: ESE, 1988

DRAWING NO. DRAWING TITLE

ESE PROJECT NUMBER

1"=2000'
SCALE

PREPARED FOR
U.S. ARMY PROGRAM MANAGER'S OFFICE
FOR ROCKY MOUNTAIN ARSENAL
ABERDEEN PROVING GROUND, MARYLAND

ESE ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.

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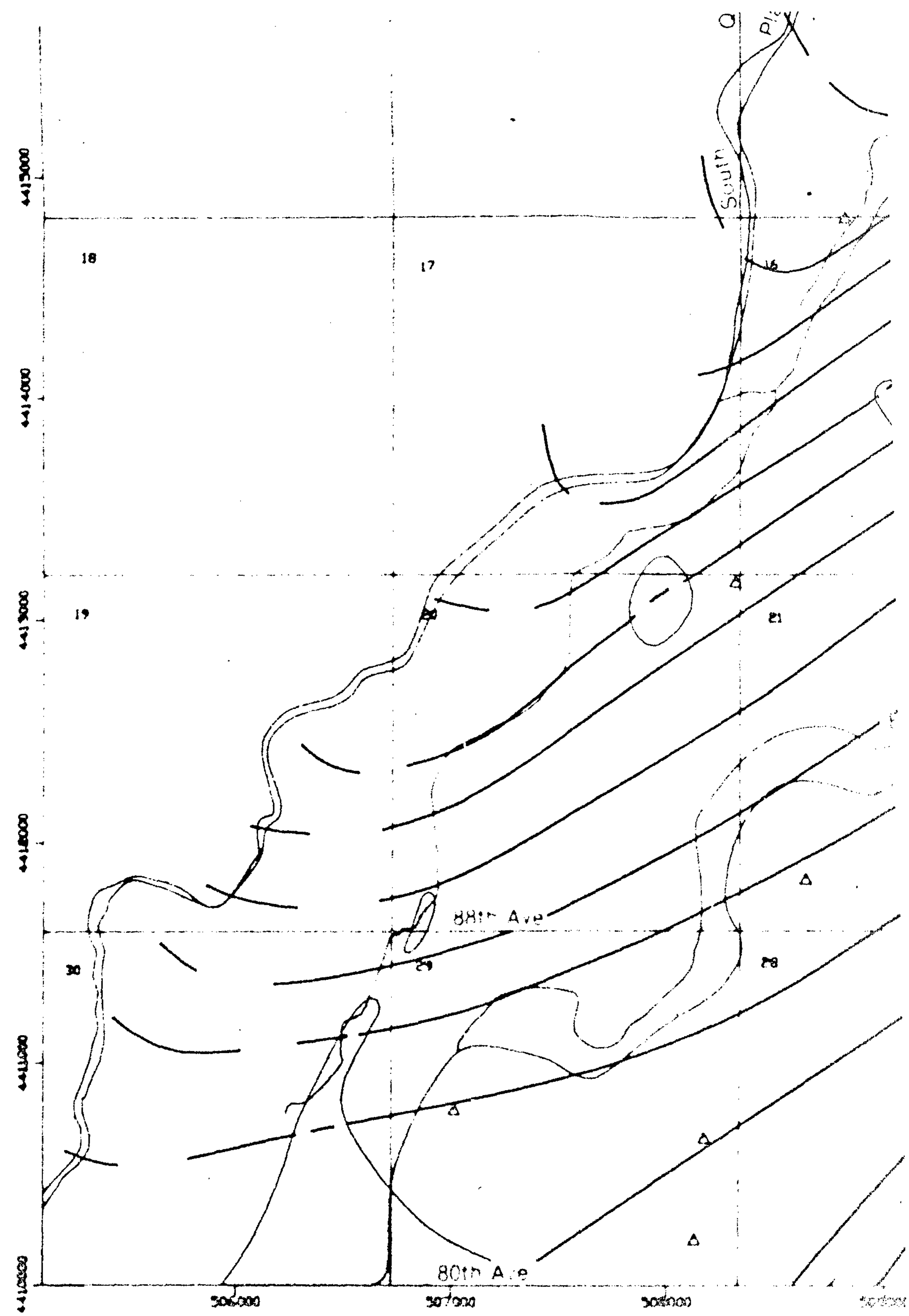

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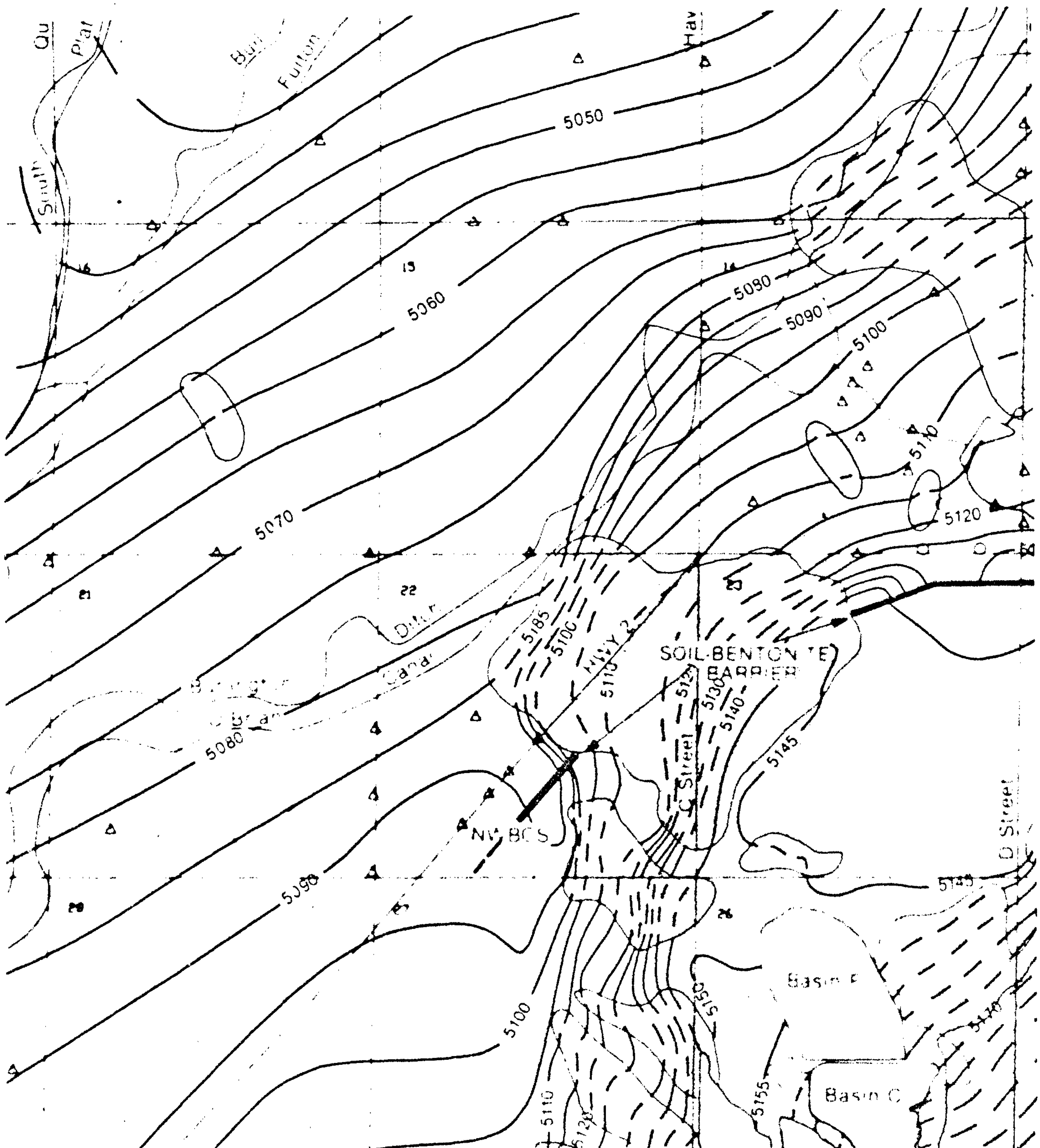

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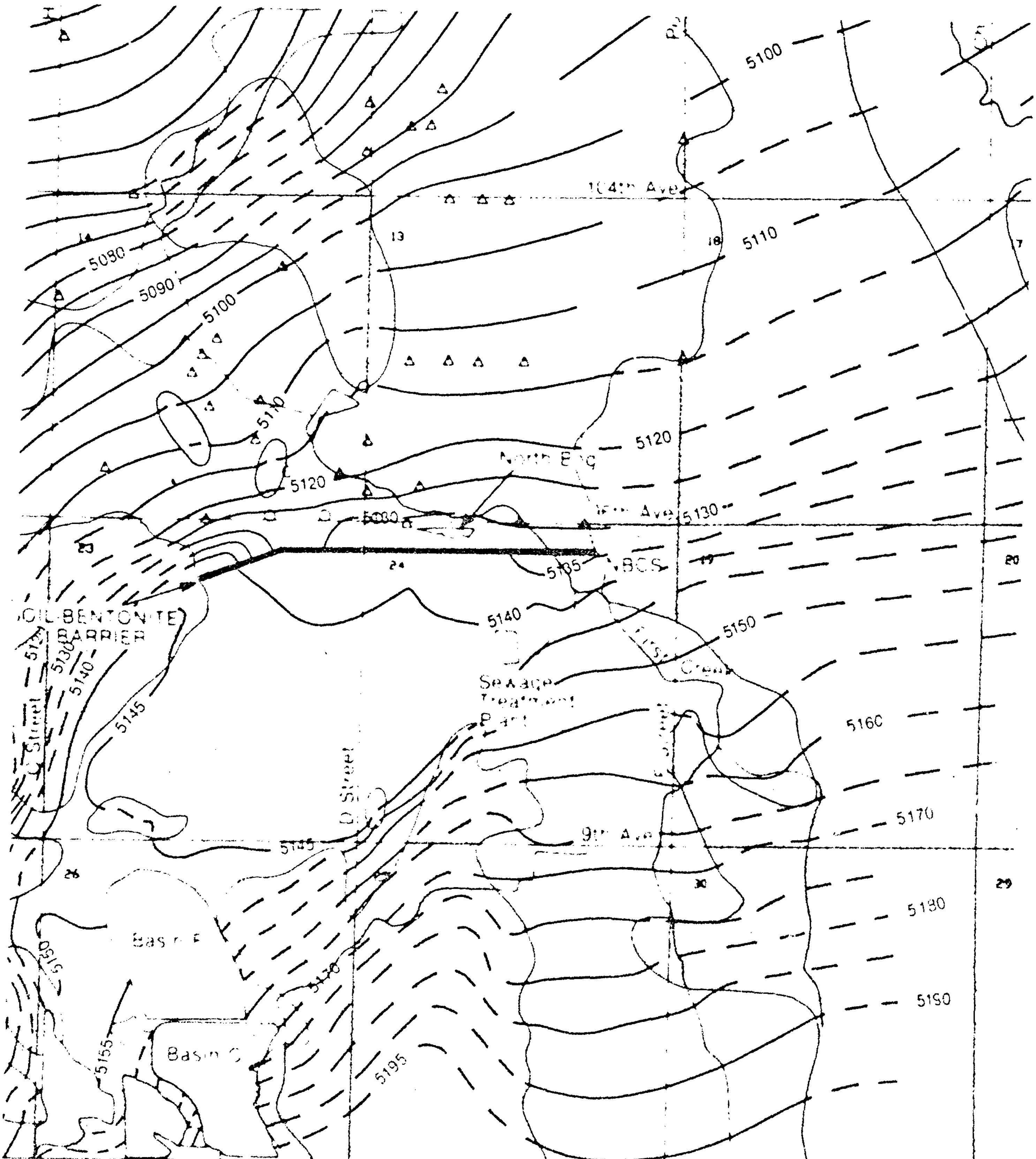

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SOIL-BENTONITE
BARRIER
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Sewage
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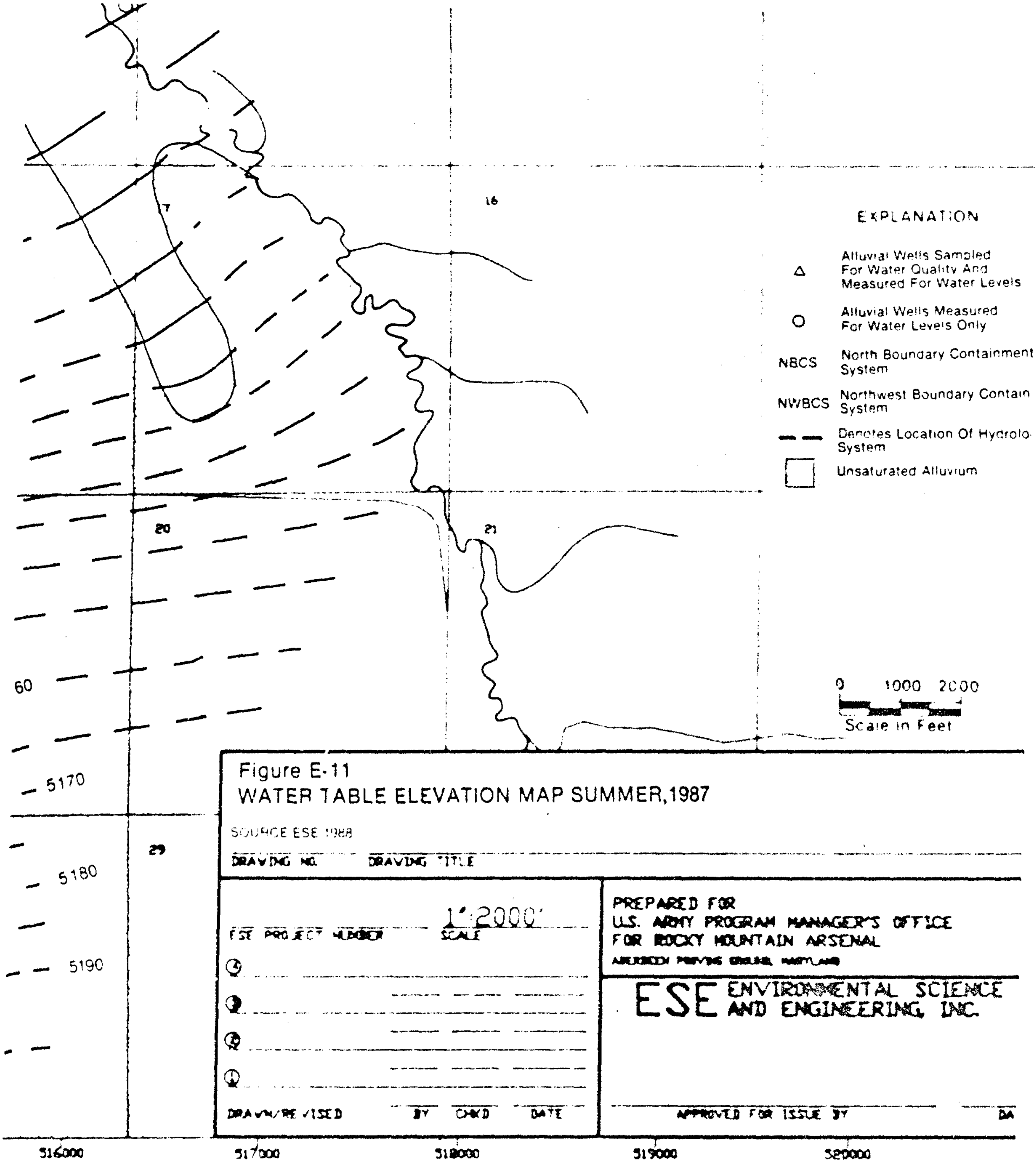

Figure E-11
WATER TABLE ELEVATION MAP SUMMER, 1987

SOURCE ESE 1988

DRAWING NO. DRAWING TITLE

ESE PROJECT NUMBER

SCALE 1" 2000'

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U.S. ARMY PROGRAM MANAGER'S OFFICE
FOR ROCKY MOUNTAIN ARSENAL
ABERDEEN PROVING GROUND, MARYLAND

ESE ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.

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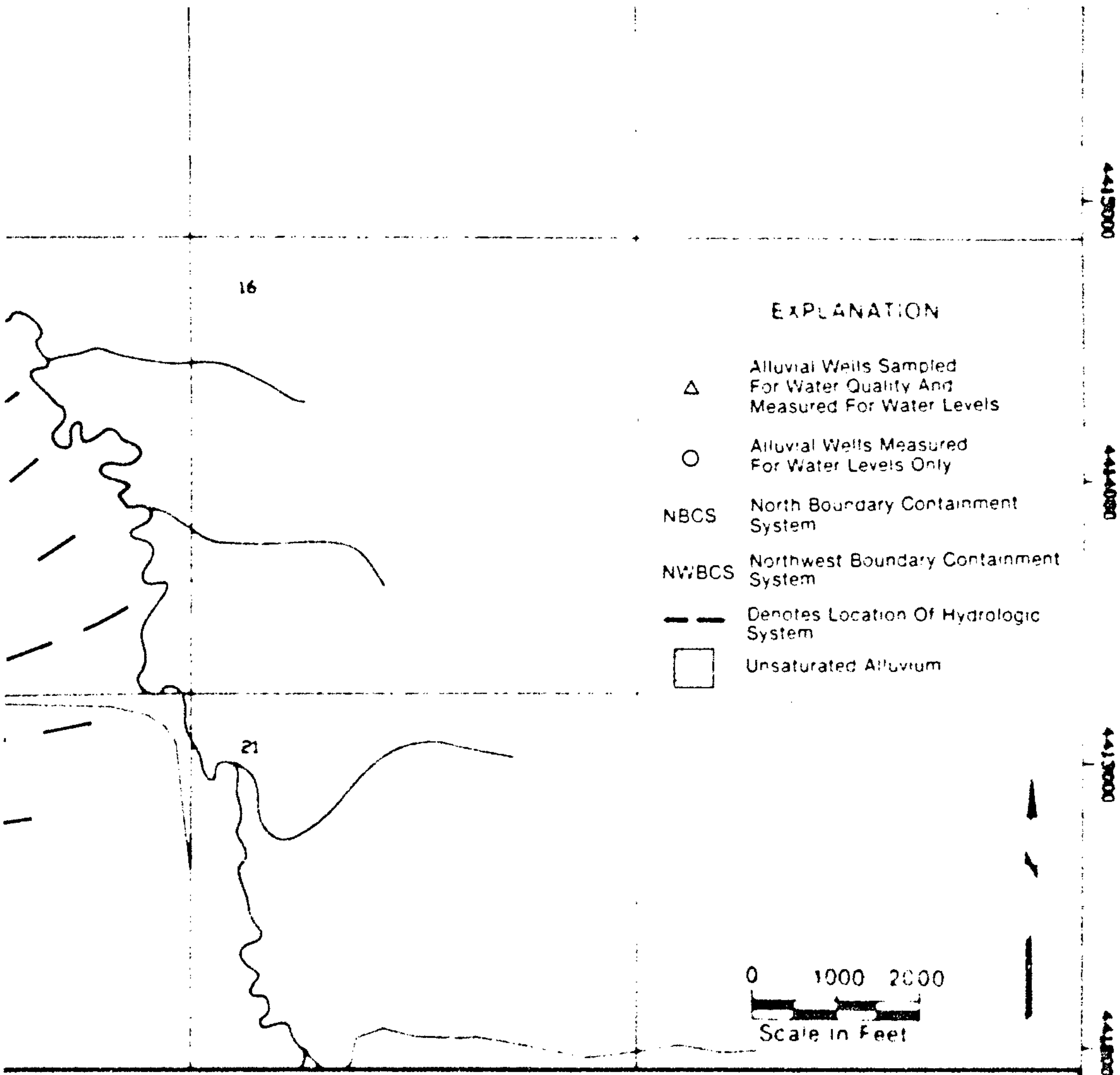

E-11
TABLE ELEVATION MAP SUMMER, 1987

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ABERDEEN PROVING GROUND, MARYLAND

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VISED BY CHKD DATE

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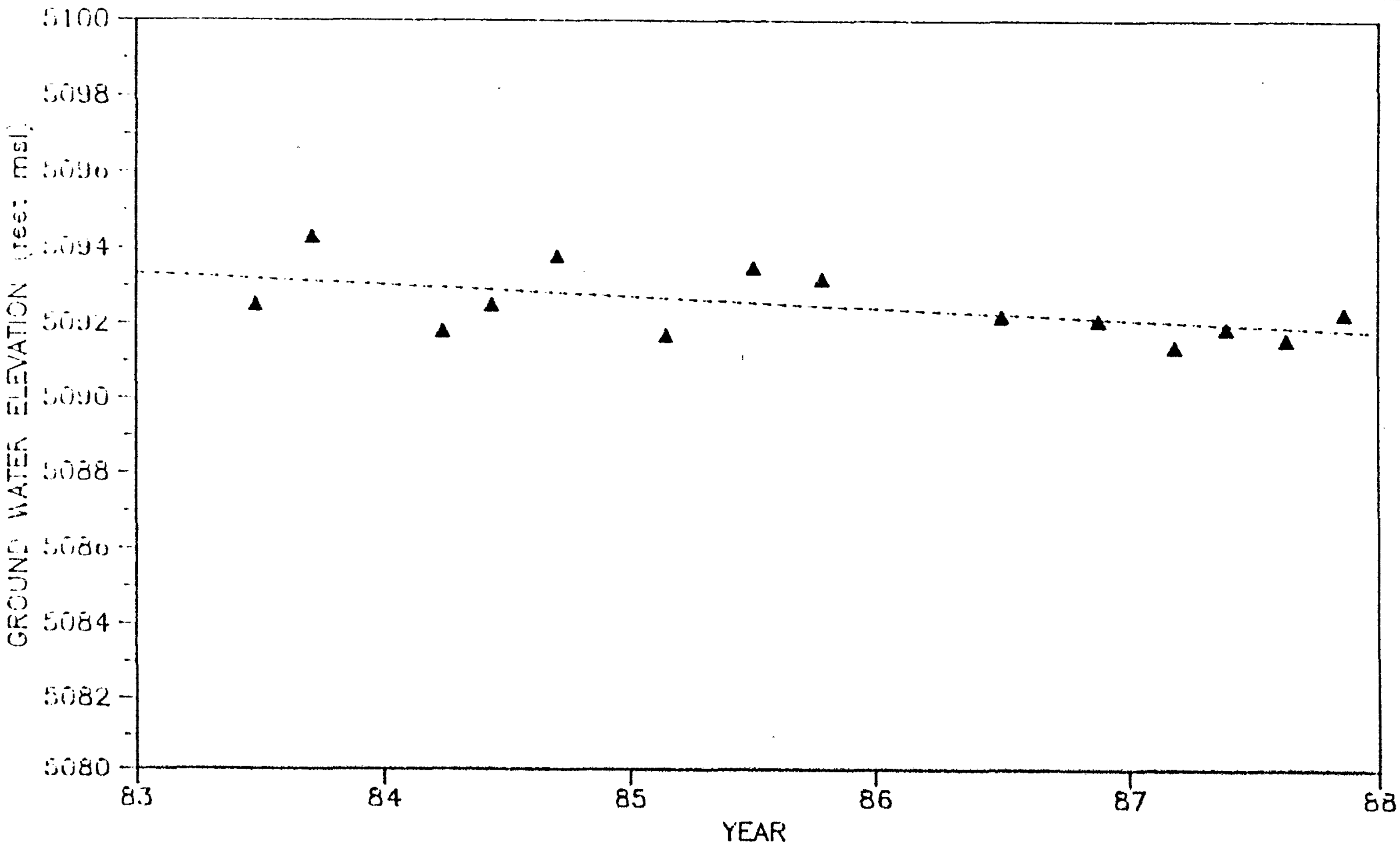
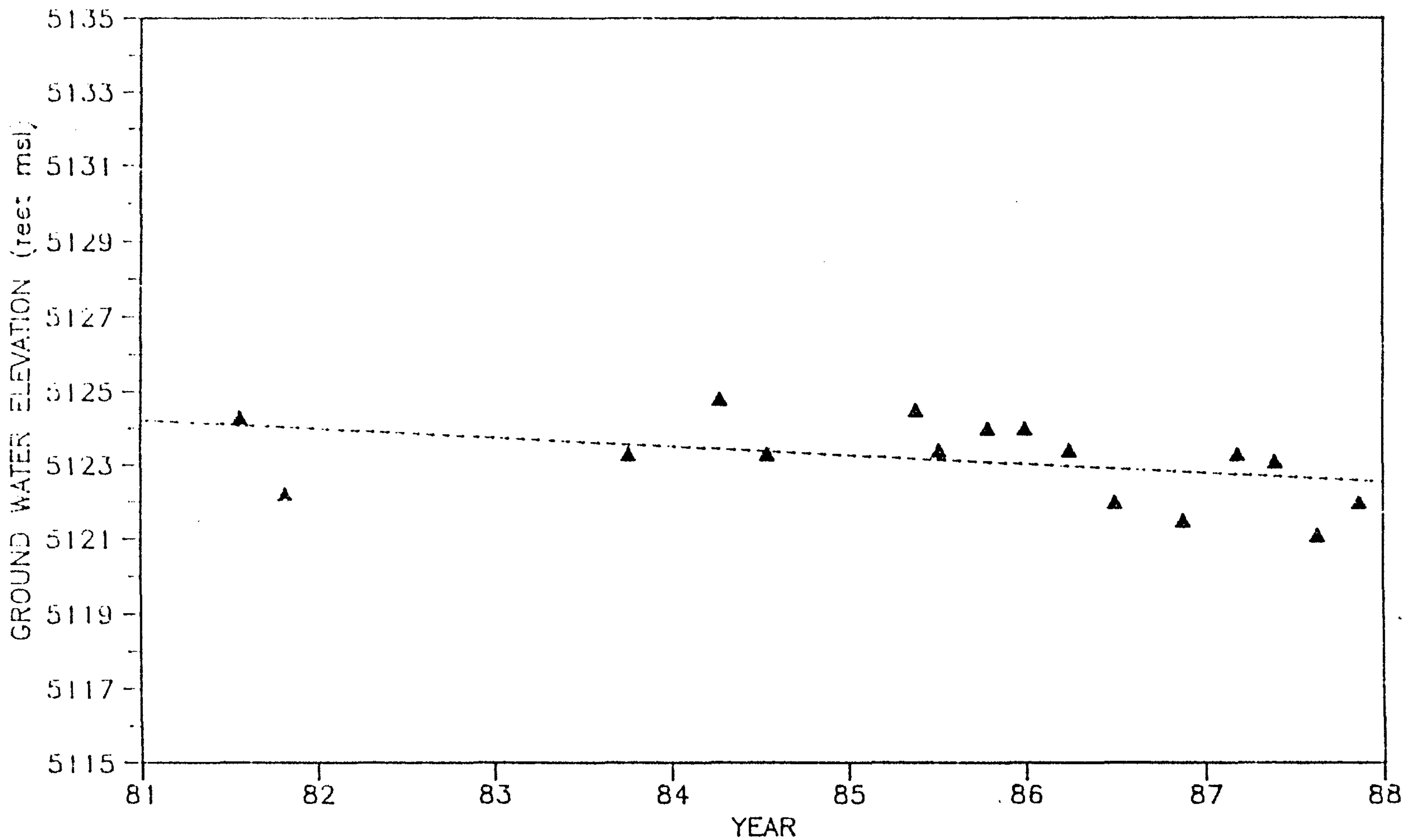


Note : Regression line equation is Y = -.31X + 5118.9

Figure E -13
HISTORICAL HYDROGRAPH
FOR WELL #37334
SOURCE: ESE, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



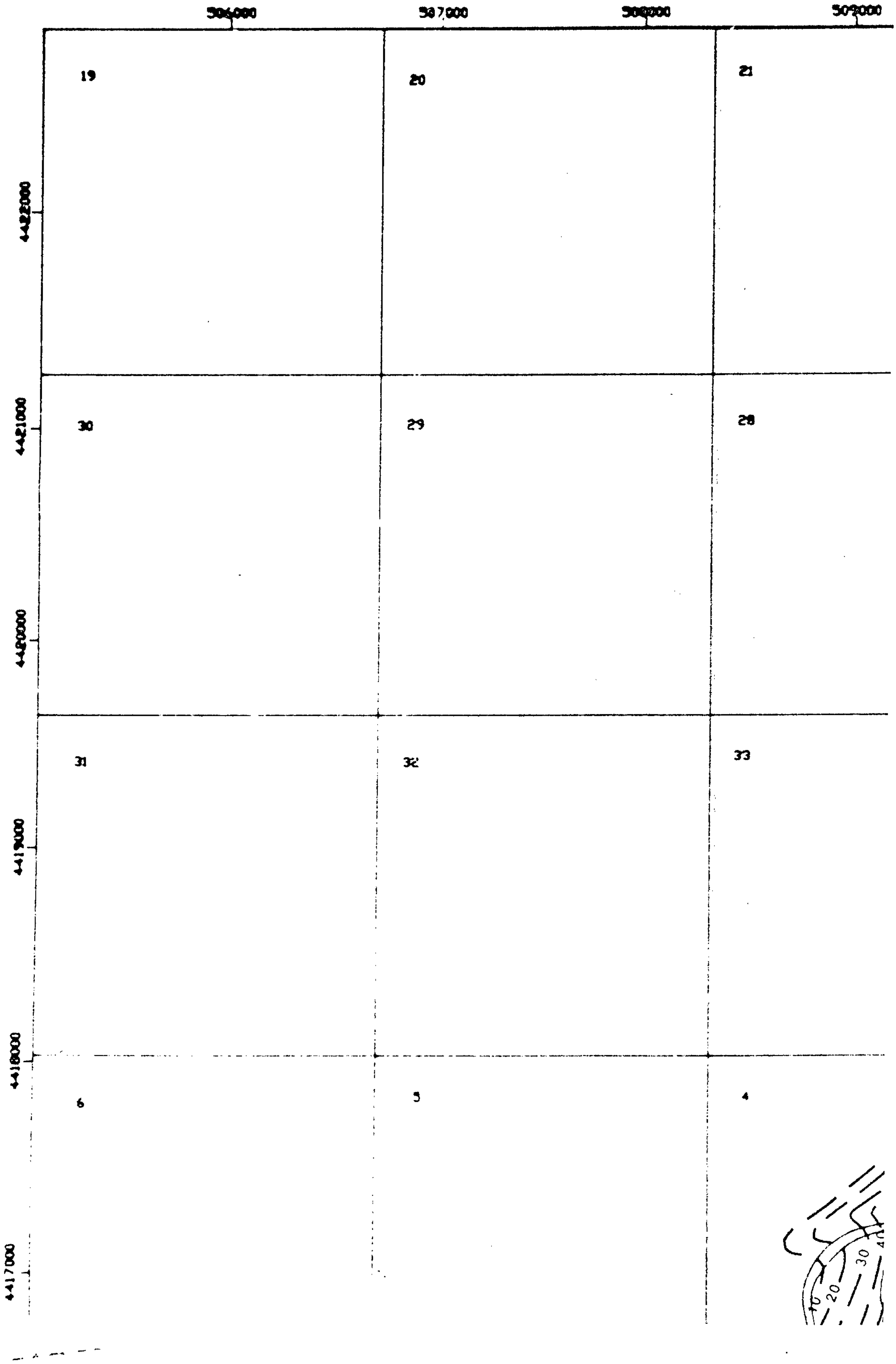
Note : Regression line equation is Y = -.24X + 5143.5

Figure E-12
HISTORICAL HYDROGRAPH
FOR WELL #37308

SOURCE: ESE, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland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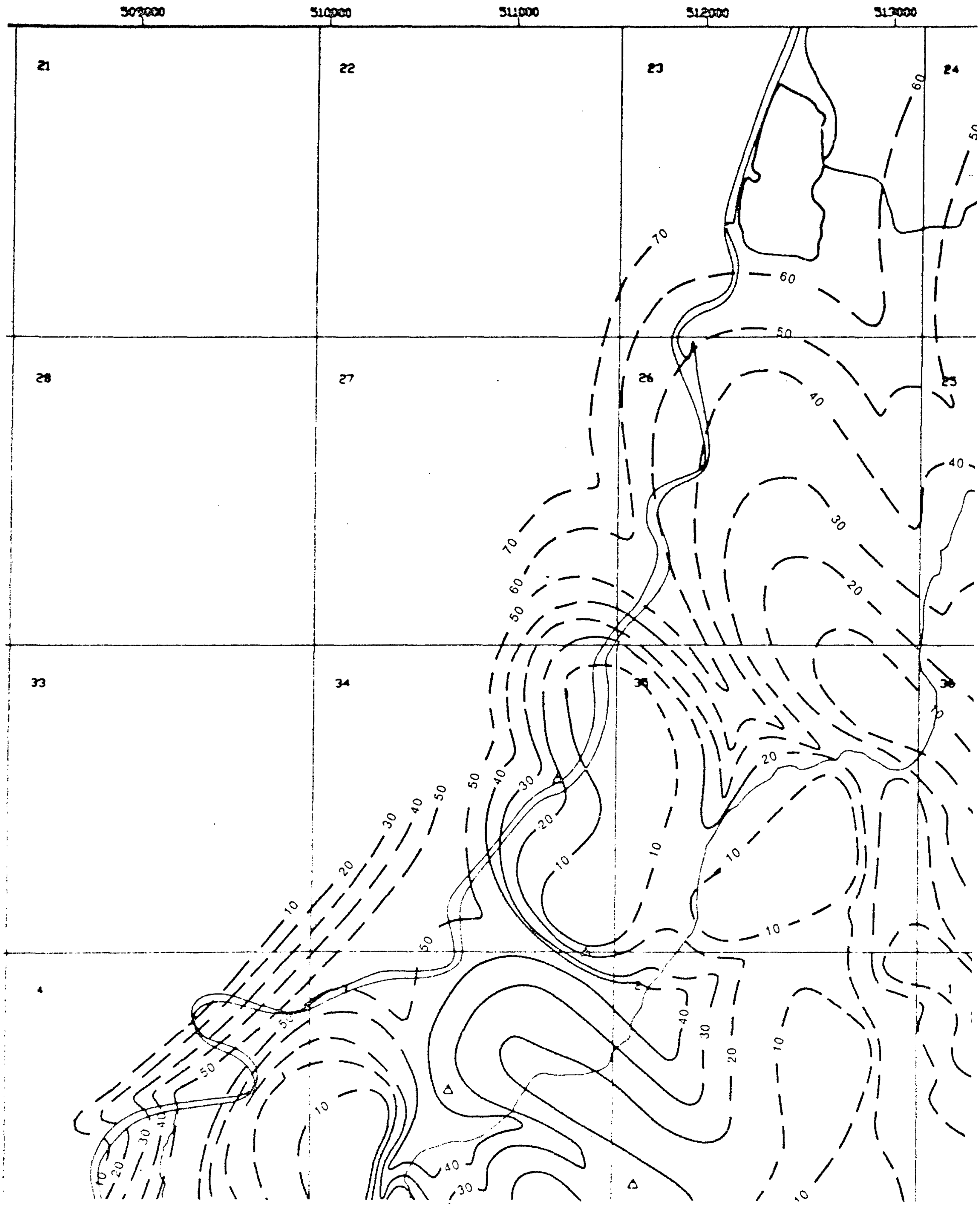
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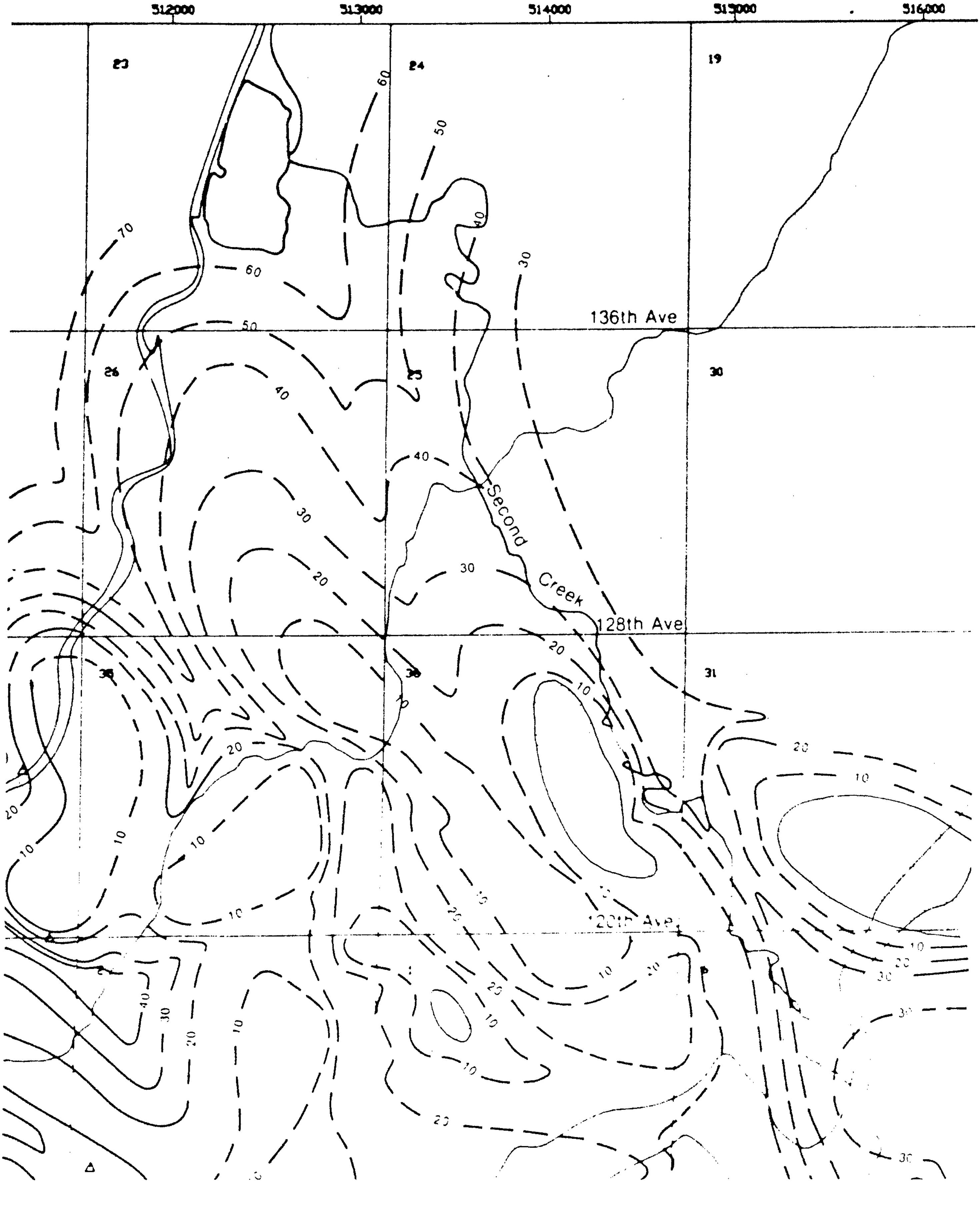

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136th Ave
128th Ave
120th Ave
Second
Creek
70
60
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40
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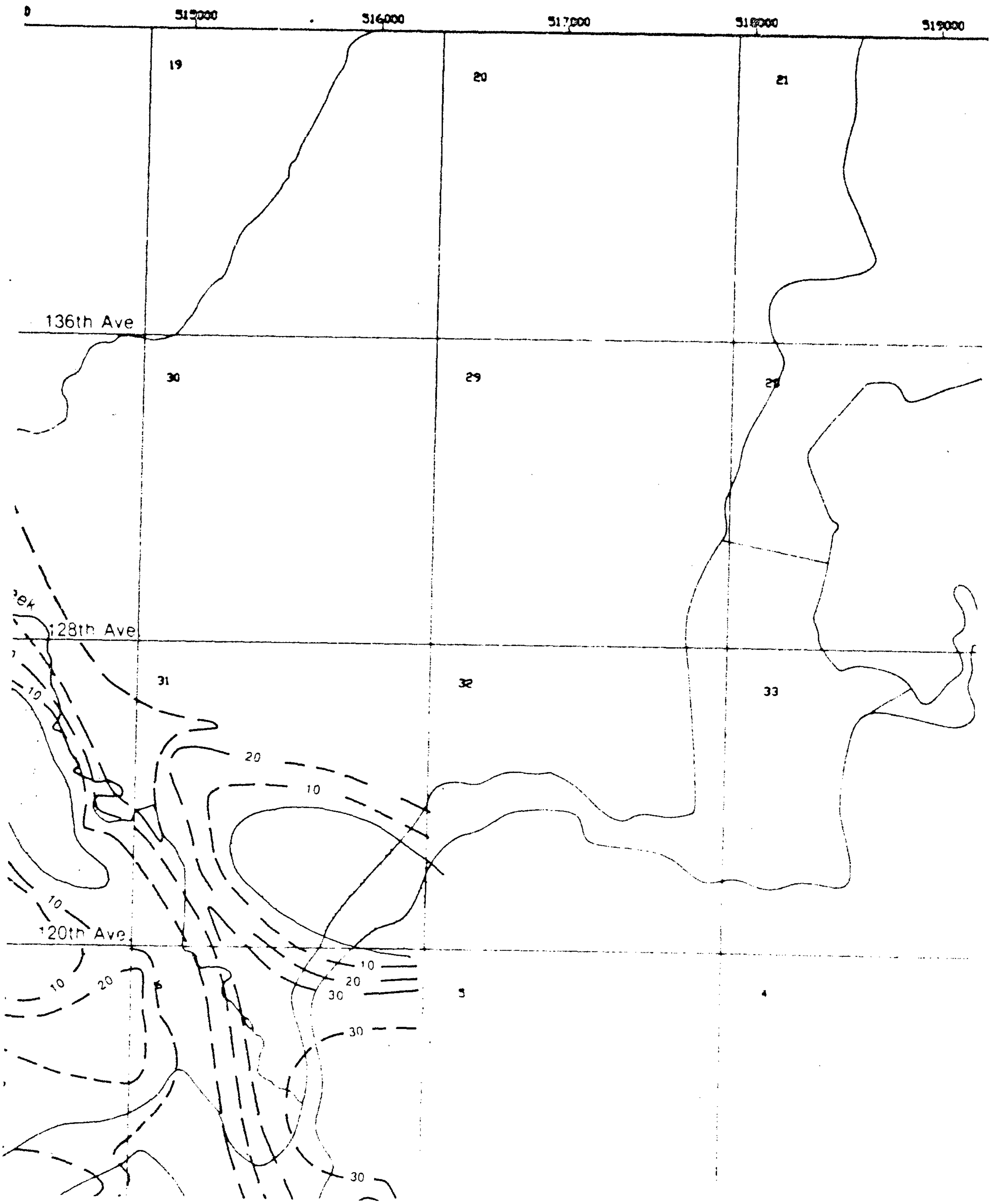
20
10



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136th Ave
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128th Ave
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120th Ave
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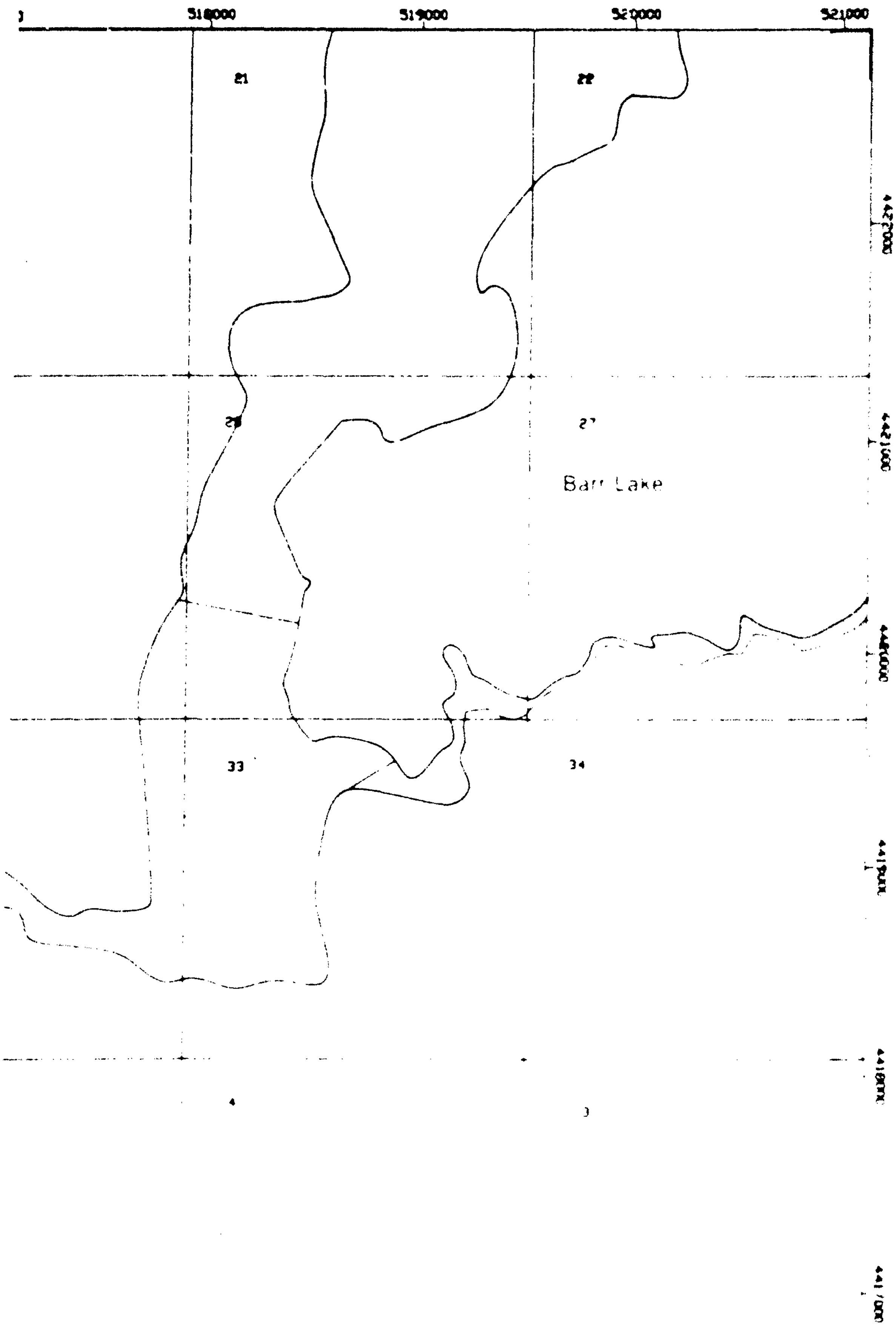
518000
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Barr Lake
33
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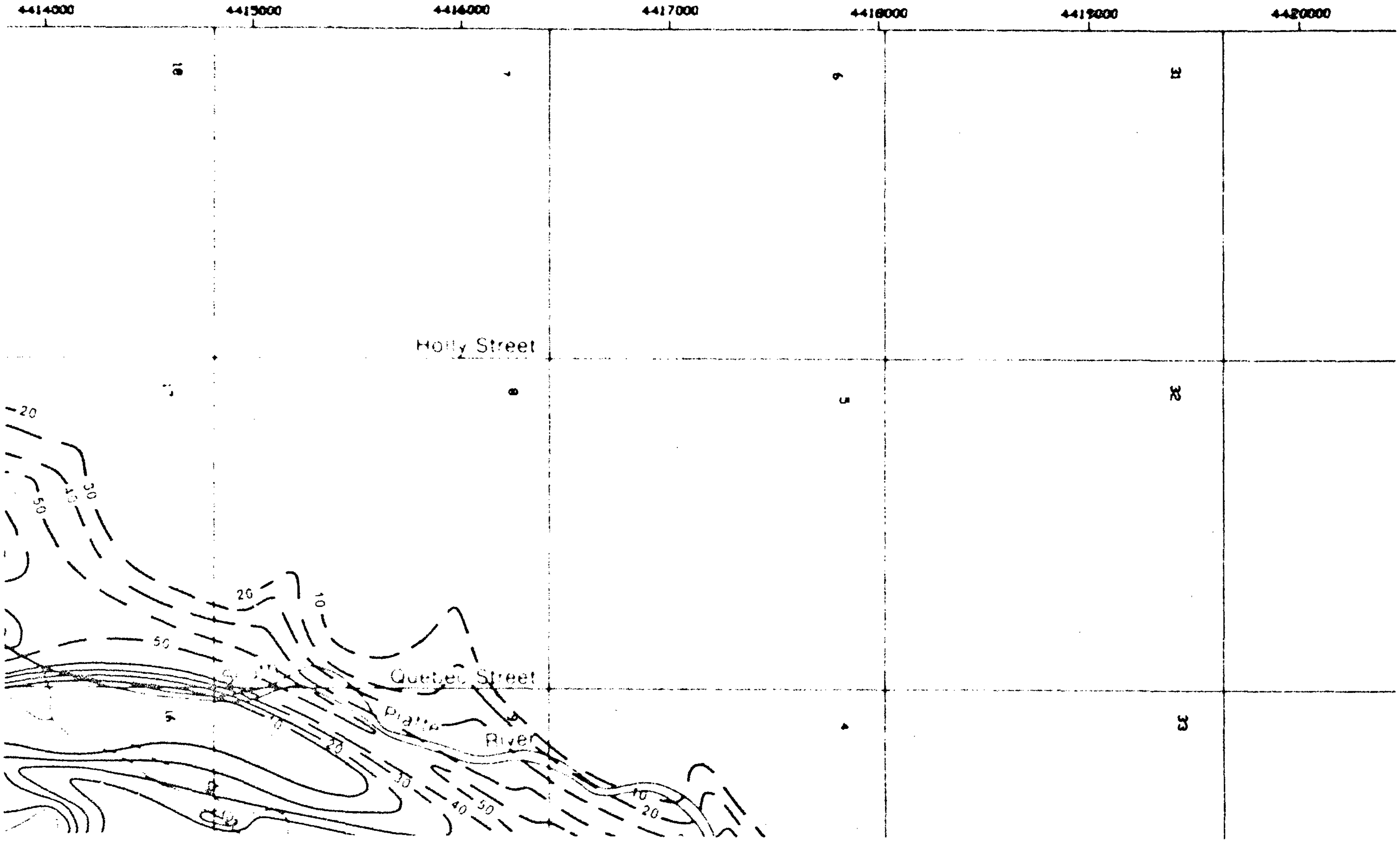
4414000
4415000
4416000
4417000
4418000
4419000
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Holly Street
Quebec Street
Platte River
18
7
6
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8
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10
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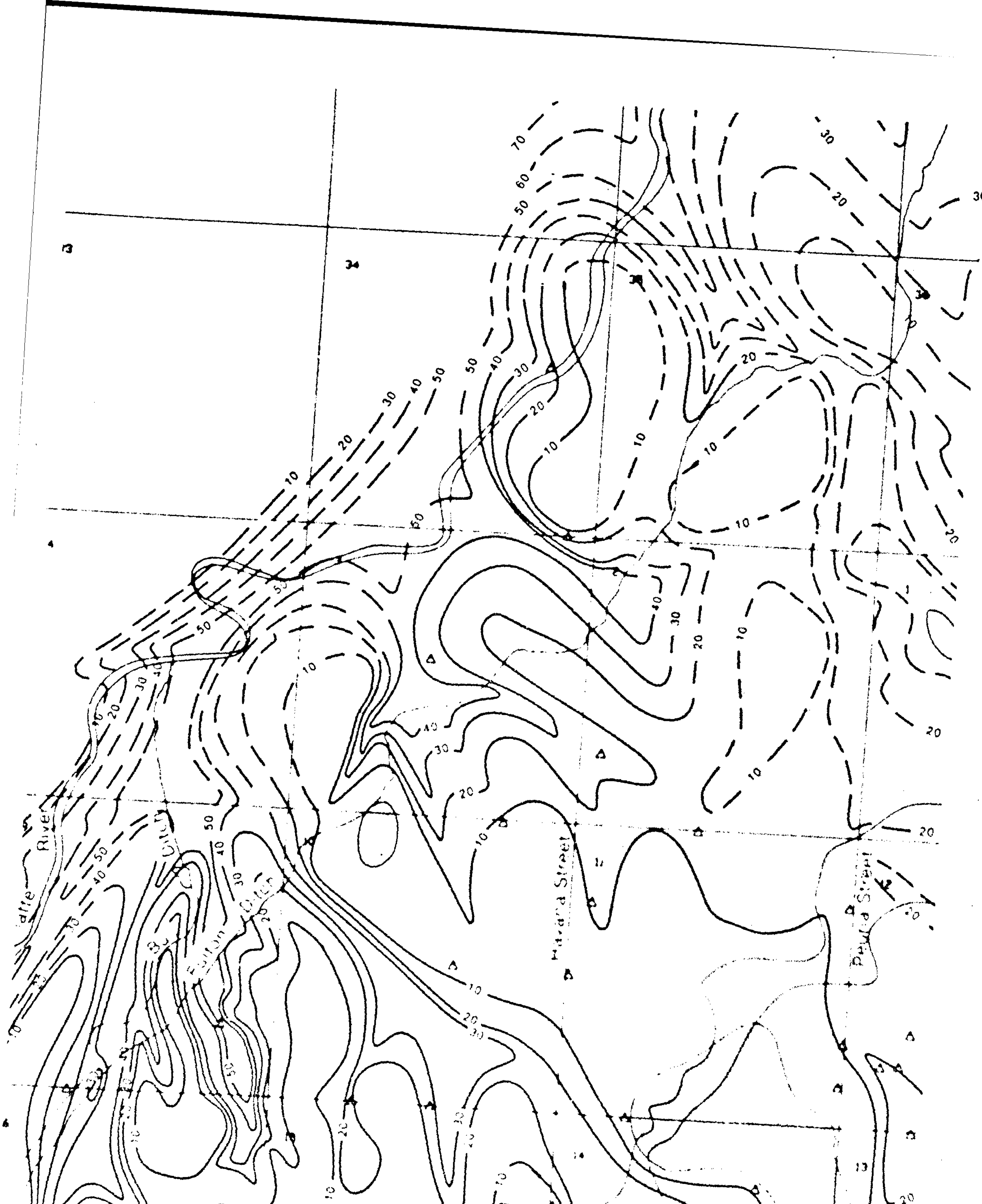
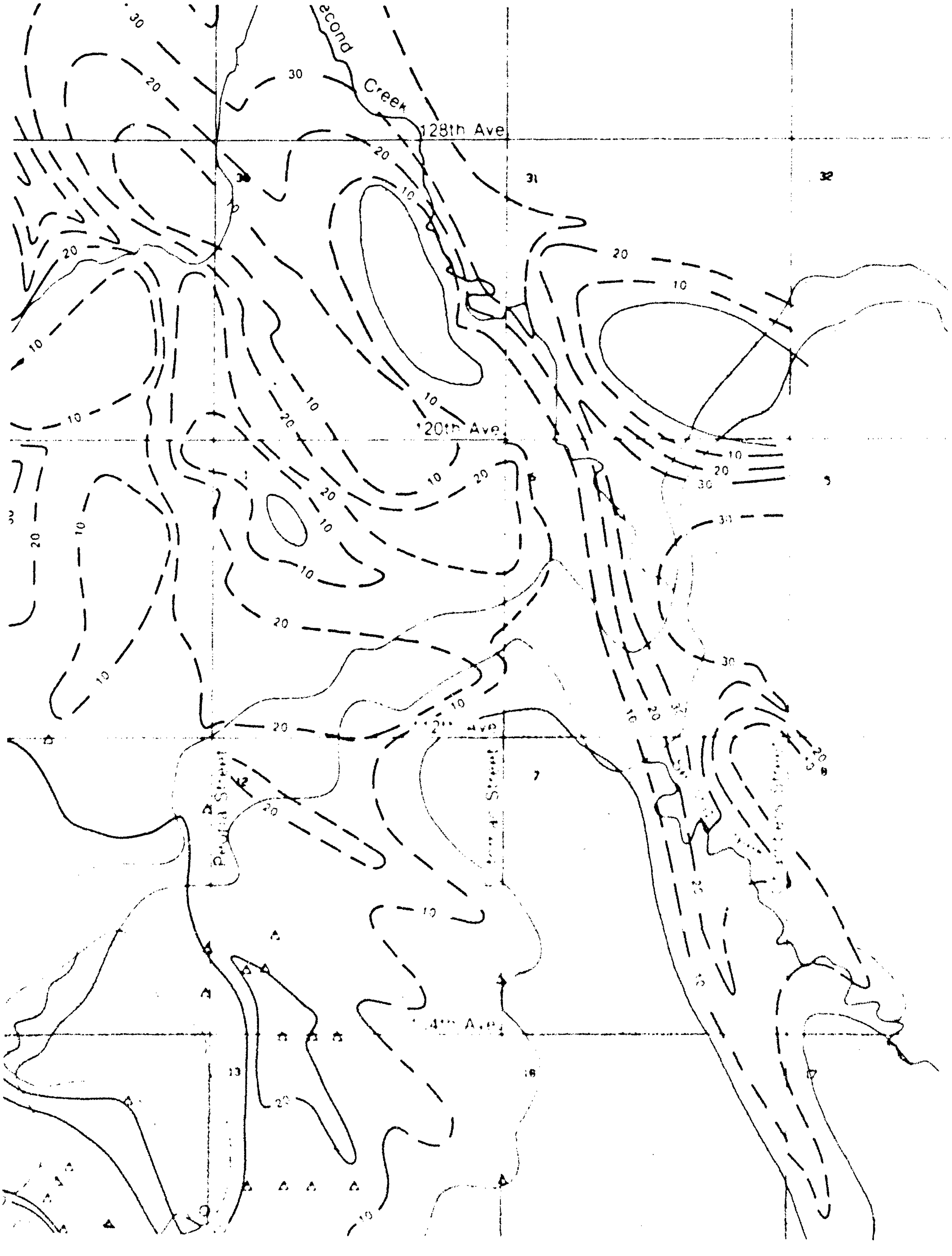
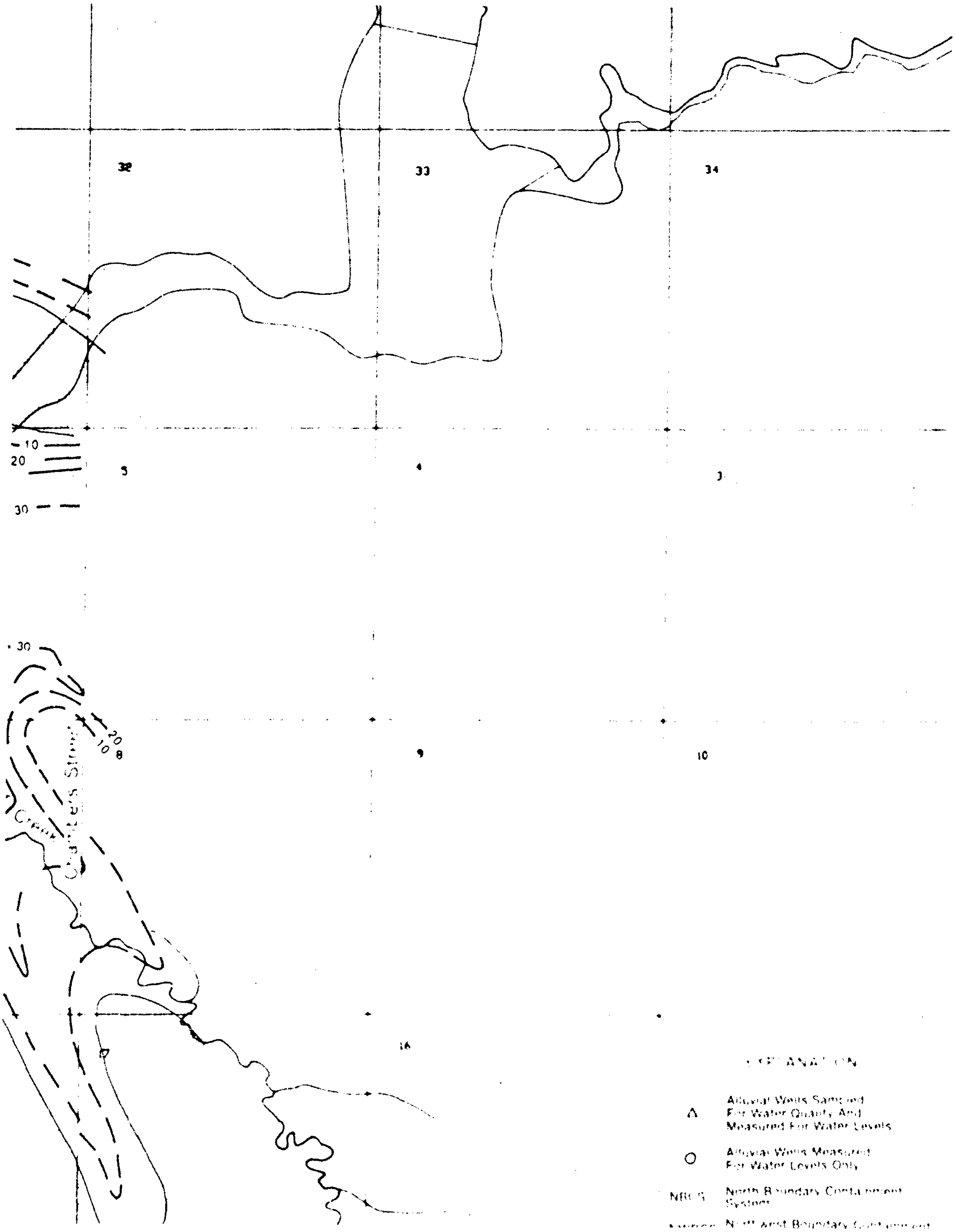
50

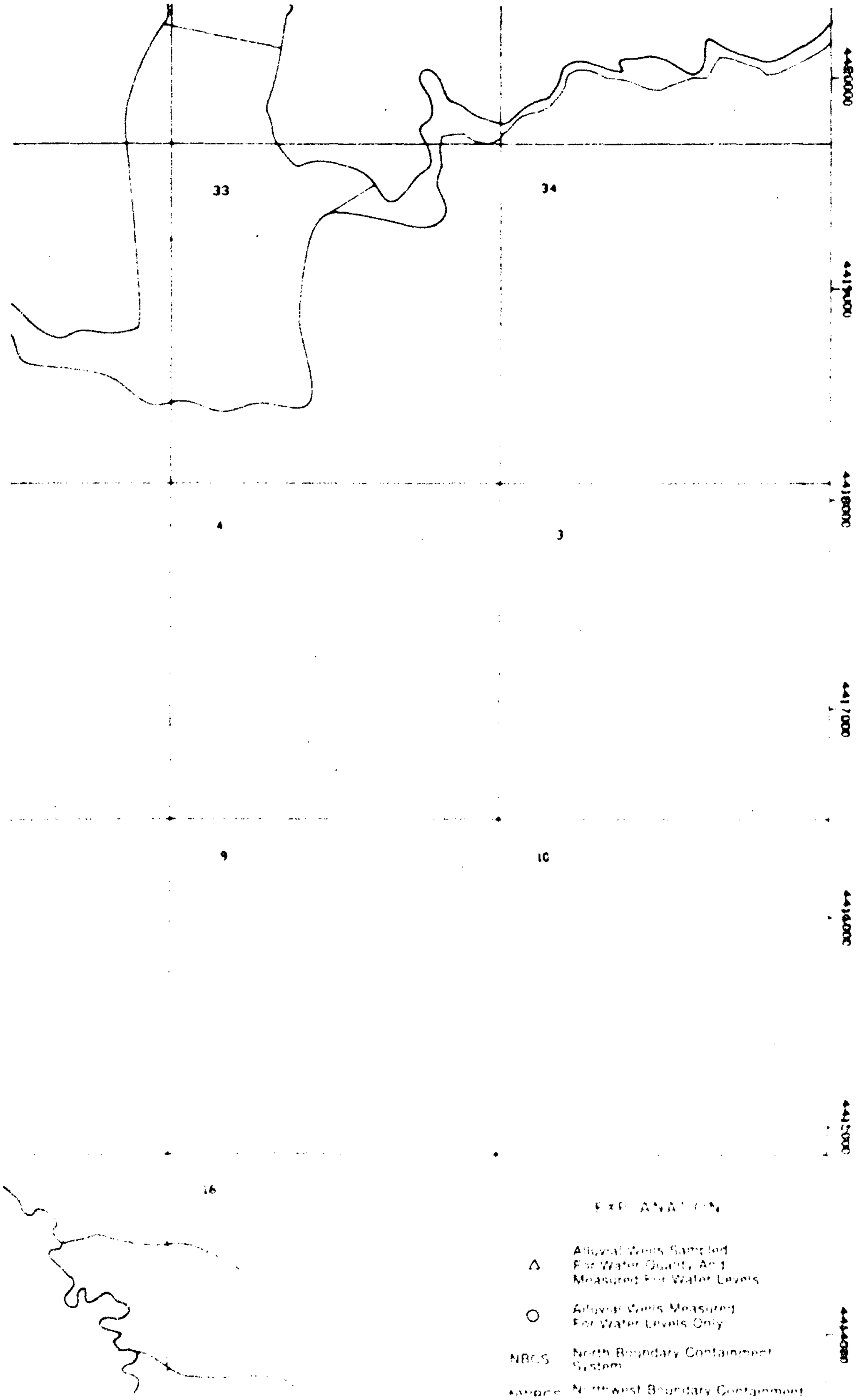

River
Fulton Ditch
Street
Street



Second Creek
128th Ave
120th Ave
Ave
Ave
Street
Street
30
31
32
5
7
8
12
13
18



32
33
34
5
4
9
10
16
10
20
30
30
20
10
8
Measured For Water Levels
For Water Levels Only
North Boundary Containment



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4418000
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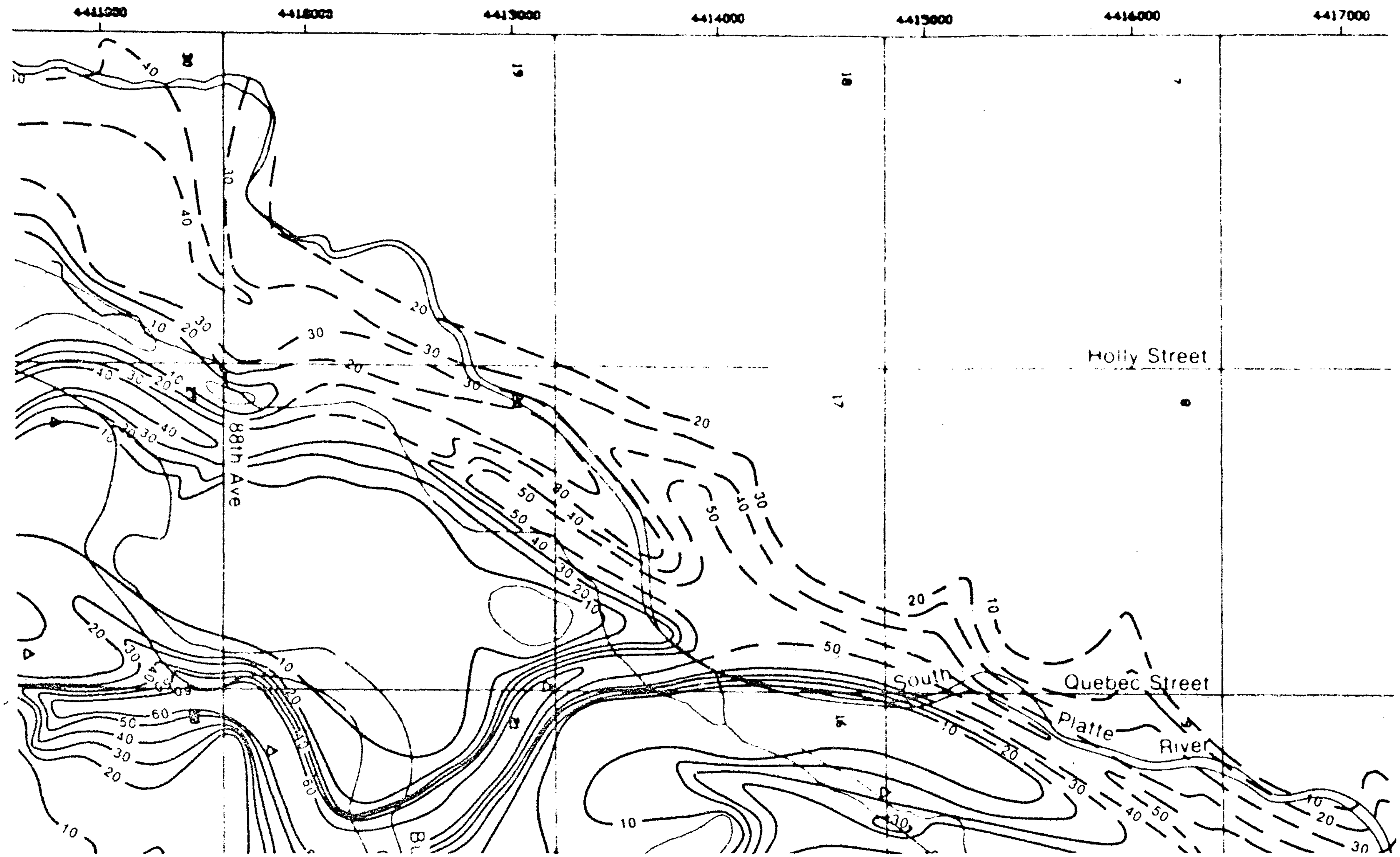
4414000
EXPLANATION
Alluvial Wells Sampled For Water Quality And Measured For Water Levels
Alluvial Wells Measured For Water Levels Only
NBCS North Boundary Containment System
Northwest Boundary Containment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Holly Street
Quebec Street
South Platte River
88th Ave
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16
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18
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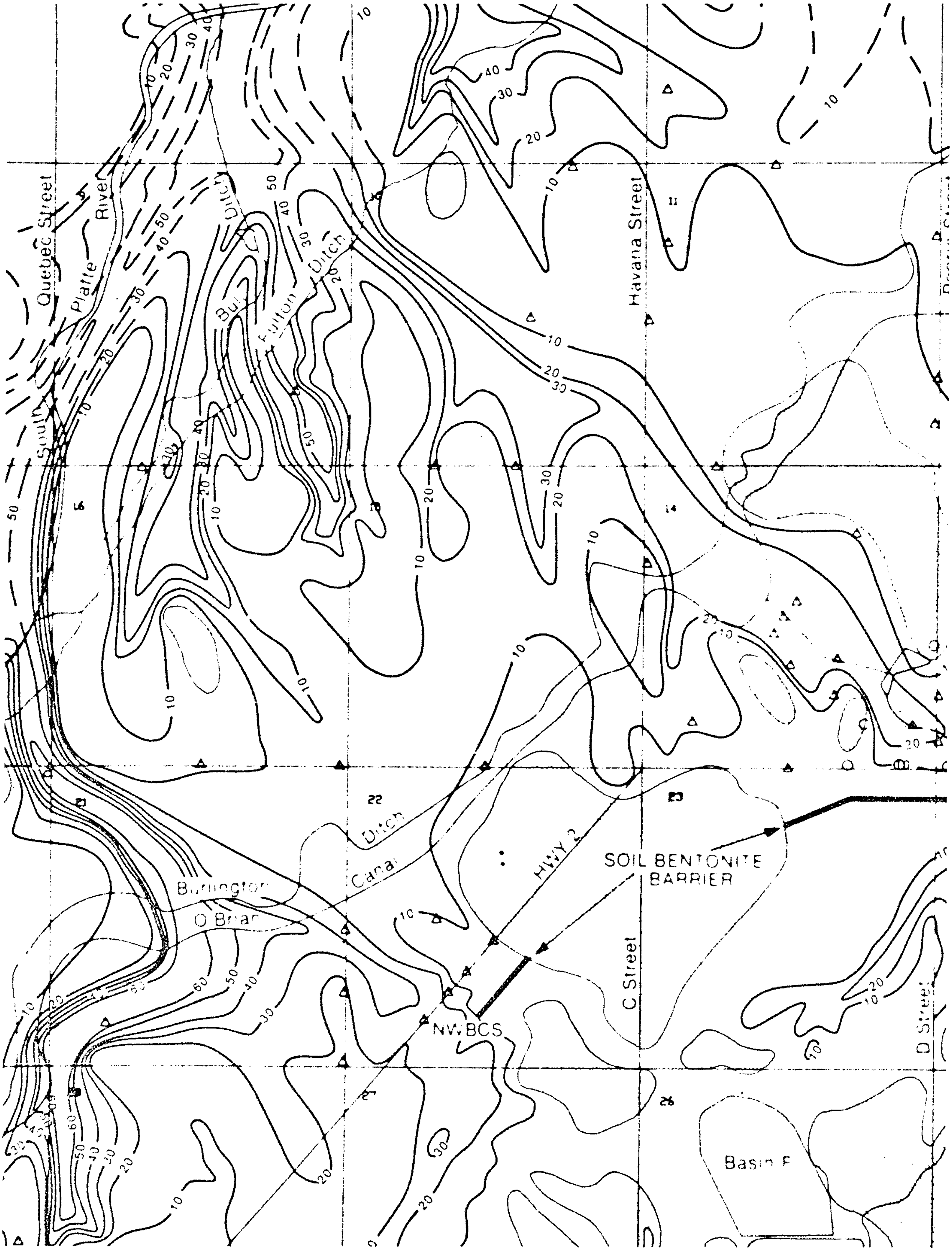
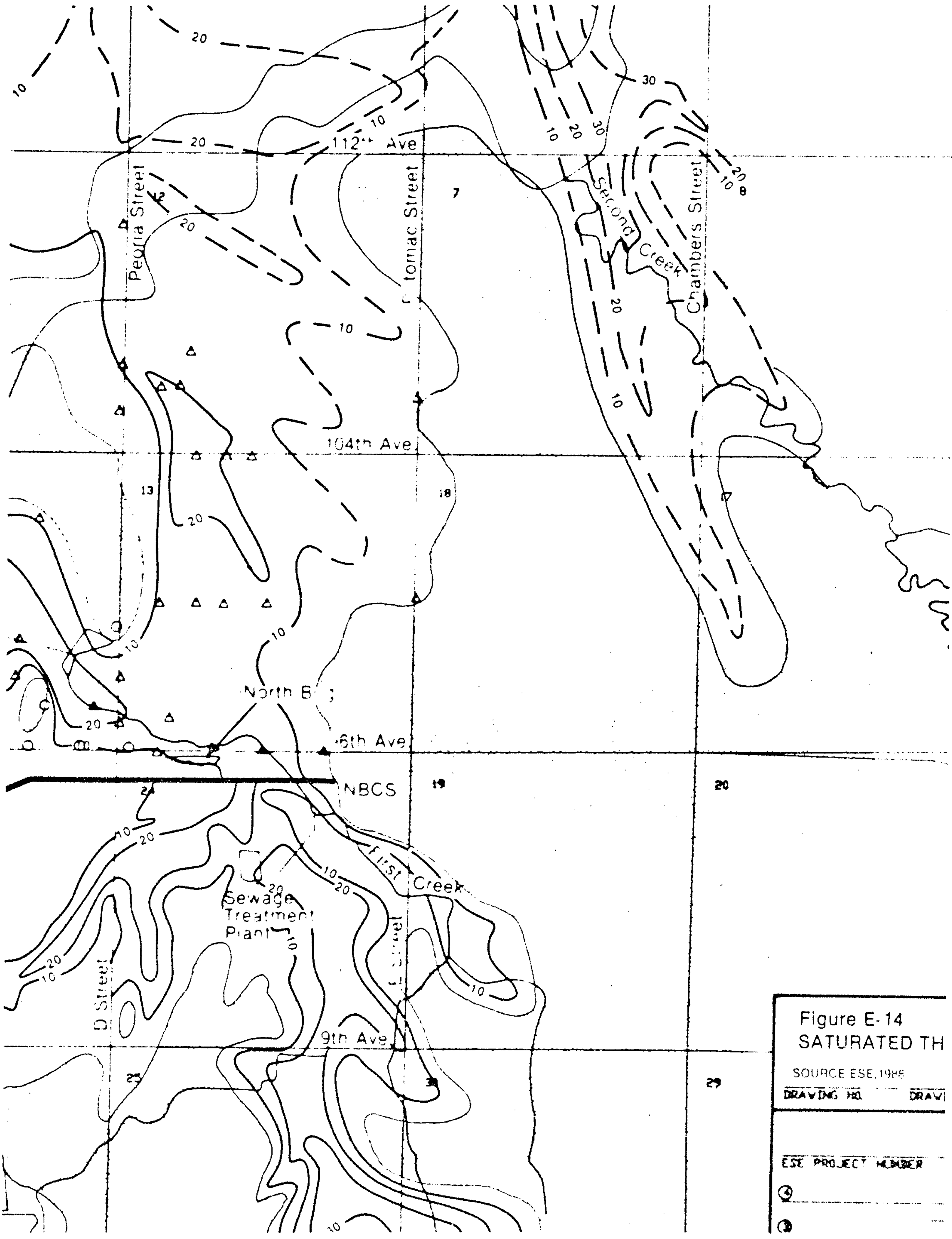

Quebec Street
South Platte River
Bull Ditch
Fulton Ditch
Havana Street
Ditch
Canal
Burlington
O'Brian
HWY 2
SOIL BENTONITE
BARRIER
C Street
NWBCS
D Street
Basin F



112th Ave
104th Ave
96th Ave
9th Ave
Peoria Street
Potomac Street
Chambers Street
Second Creek
First Creek
D Street
North Bog
NBCS
Sewage Treatment Plant
Figure E-14
SATURATED TH
SOURCE ESE, 1988
DRAWING NO.
ESE PROJECT NUMBER

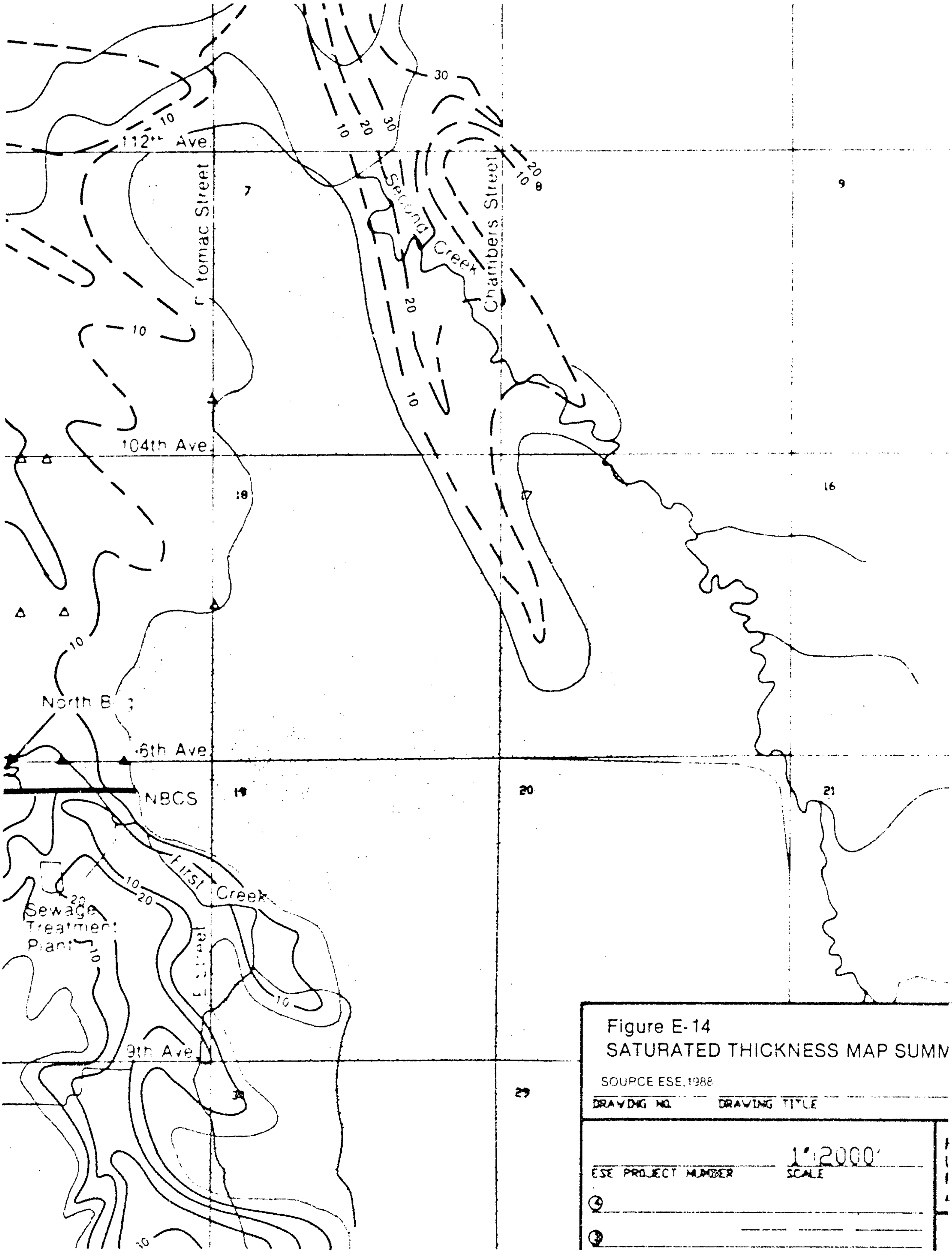
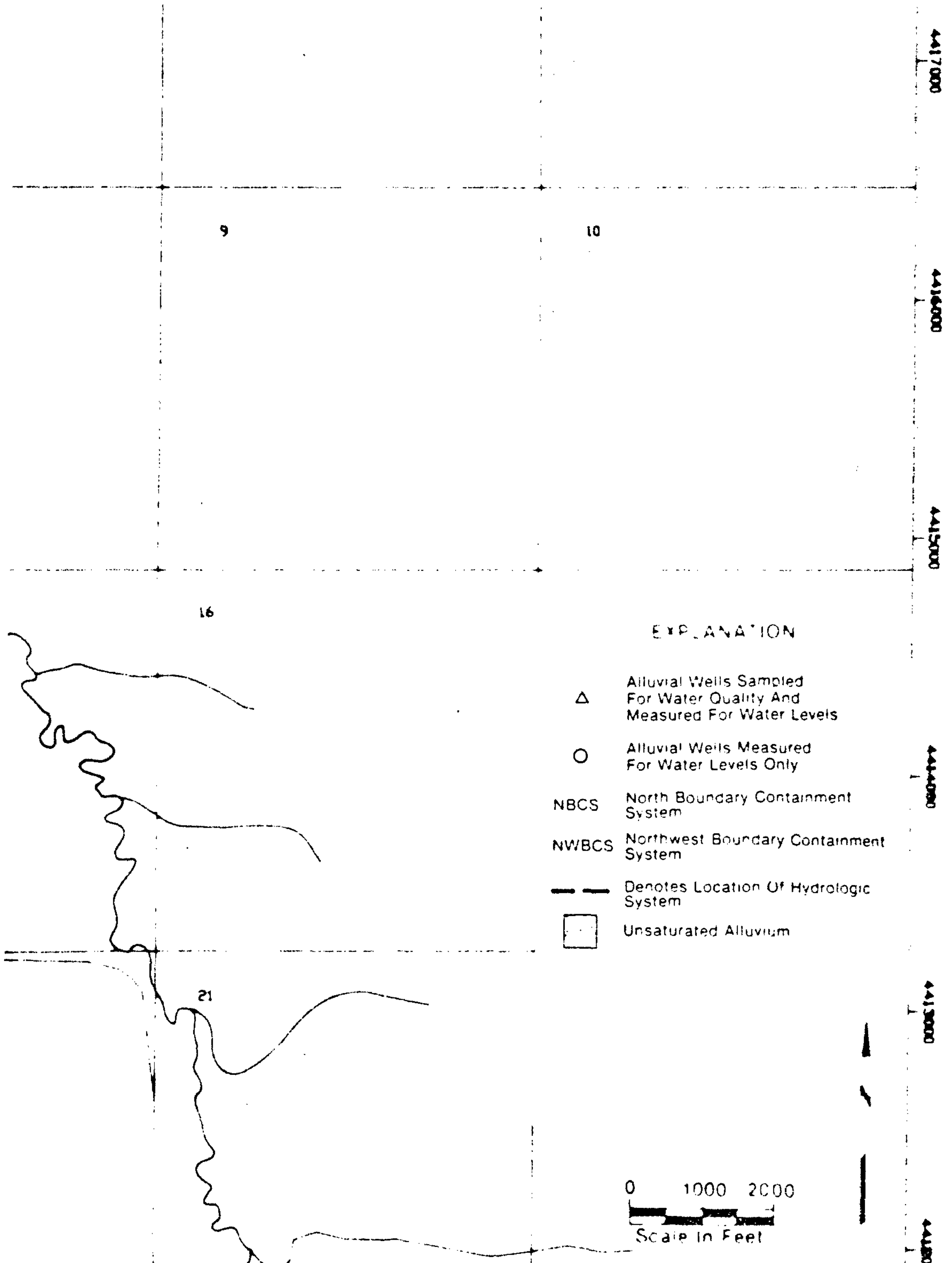


Figure E-14
SATURATED THICKNESS MAP SUMM

SOURCE ESE, 1988

DRAWING NO. DRAWING TITLE

1" : 2000'
ESE PROJECT NUMBER SCALE



E-14
ATED THICKNESS MAP SUMMER,1987

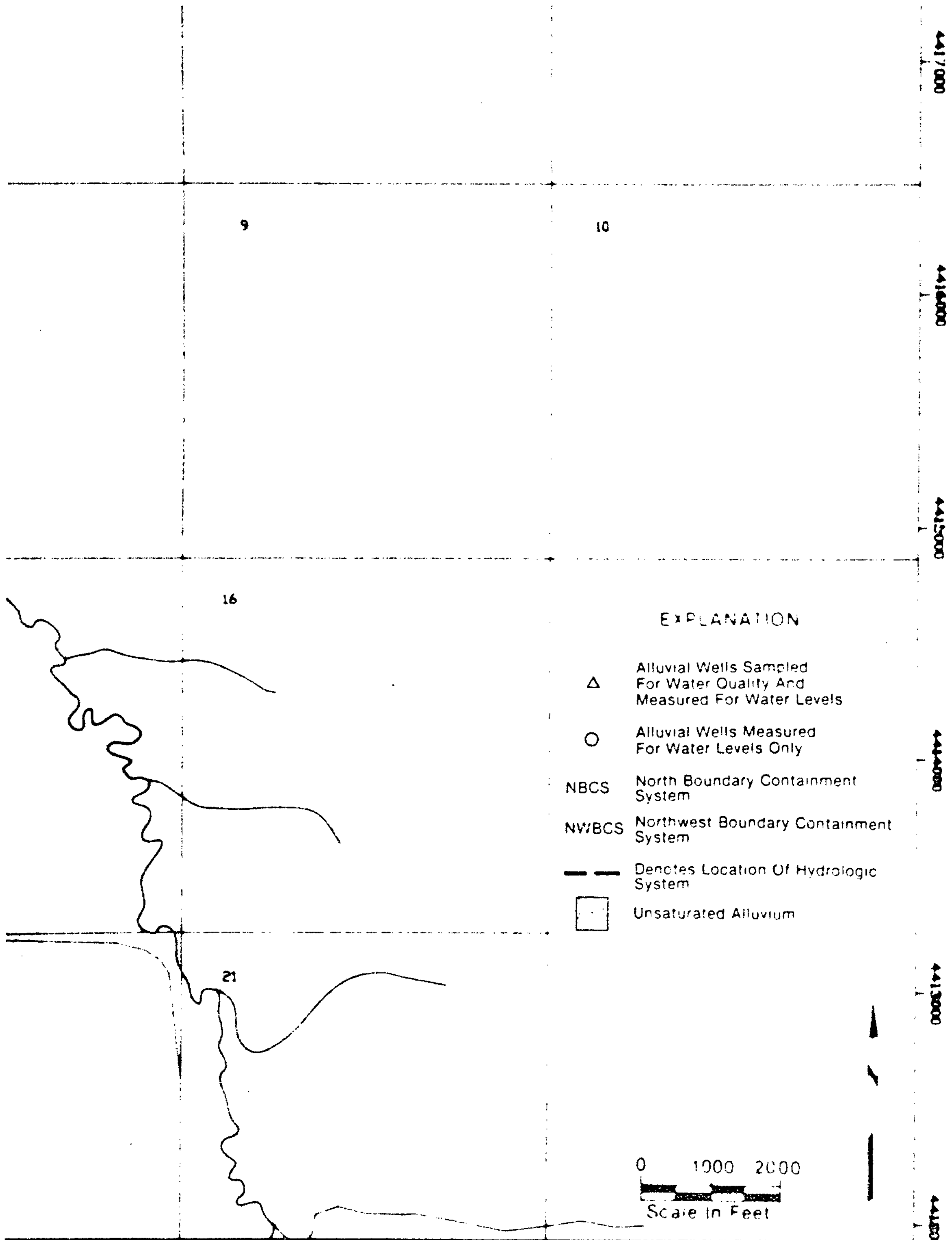
SE 1988

DRAWING TITLE

T NUMBER 1"=2000' SCALE

PREPARED FOR
U.S. ARMY PROGRAM MANAGER'S OFFICE
FOR ROCKY MOUNTAIN ARSENAL
ABERDEEN PROVING GROUND, MARYLAND

ESE ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.



re E-14
JRATED THICKNESS MAP SUMMER,1987

E.ESE.1988

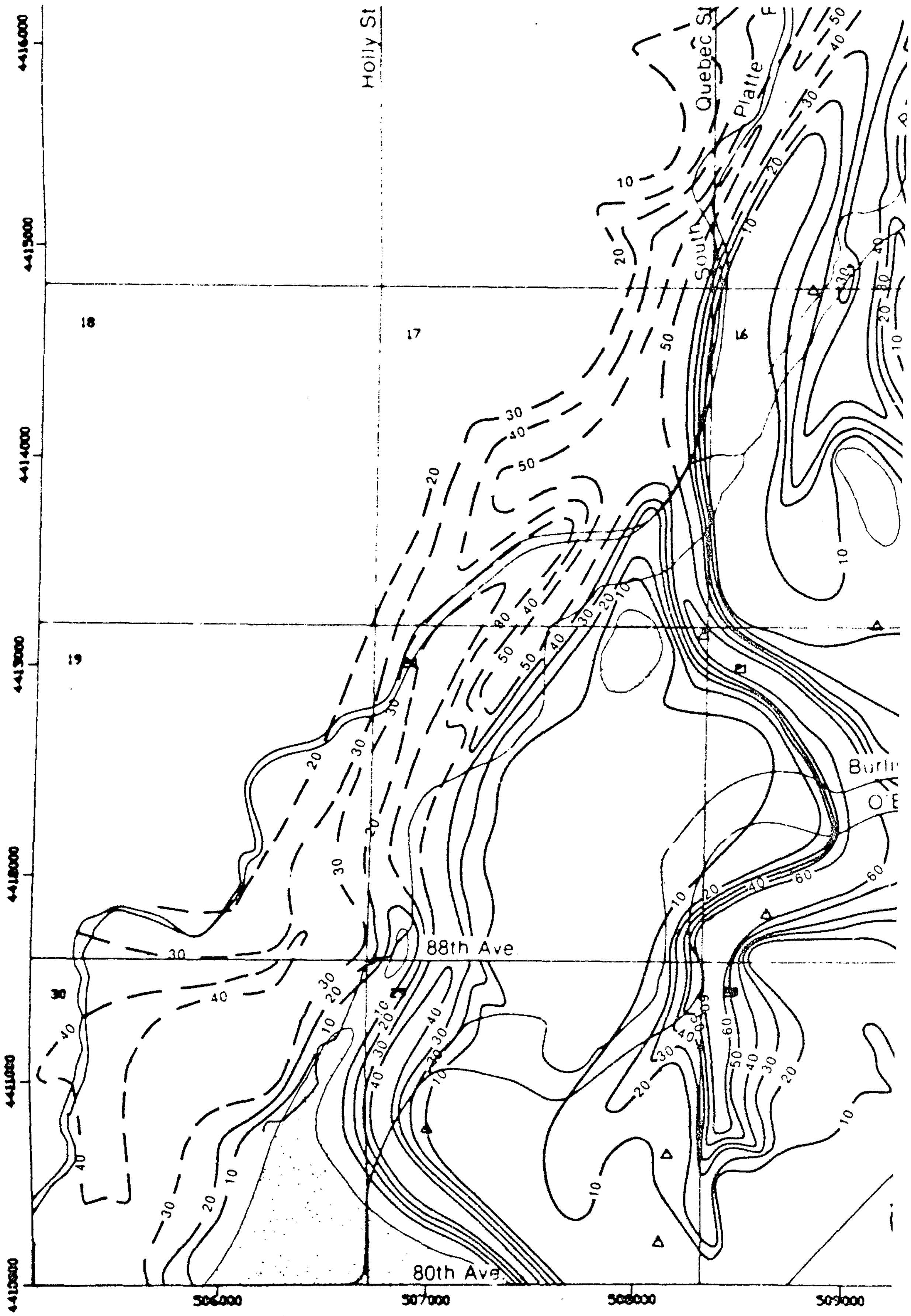
NO. DRAWING TITLE

JECT NUMBER

1":2000'
SCALE

PREPARED FOR
U.S. ARMY PROGRAM MANAGER'S OFFICE
FOR ROCKY MOUNTAIN ARSENAL
ABERDEEN PROVING GROUND, MARYLAND

ESE ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.


Holly St
Quebec St
South Platte
88th Ave.
80th Ave.
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507000
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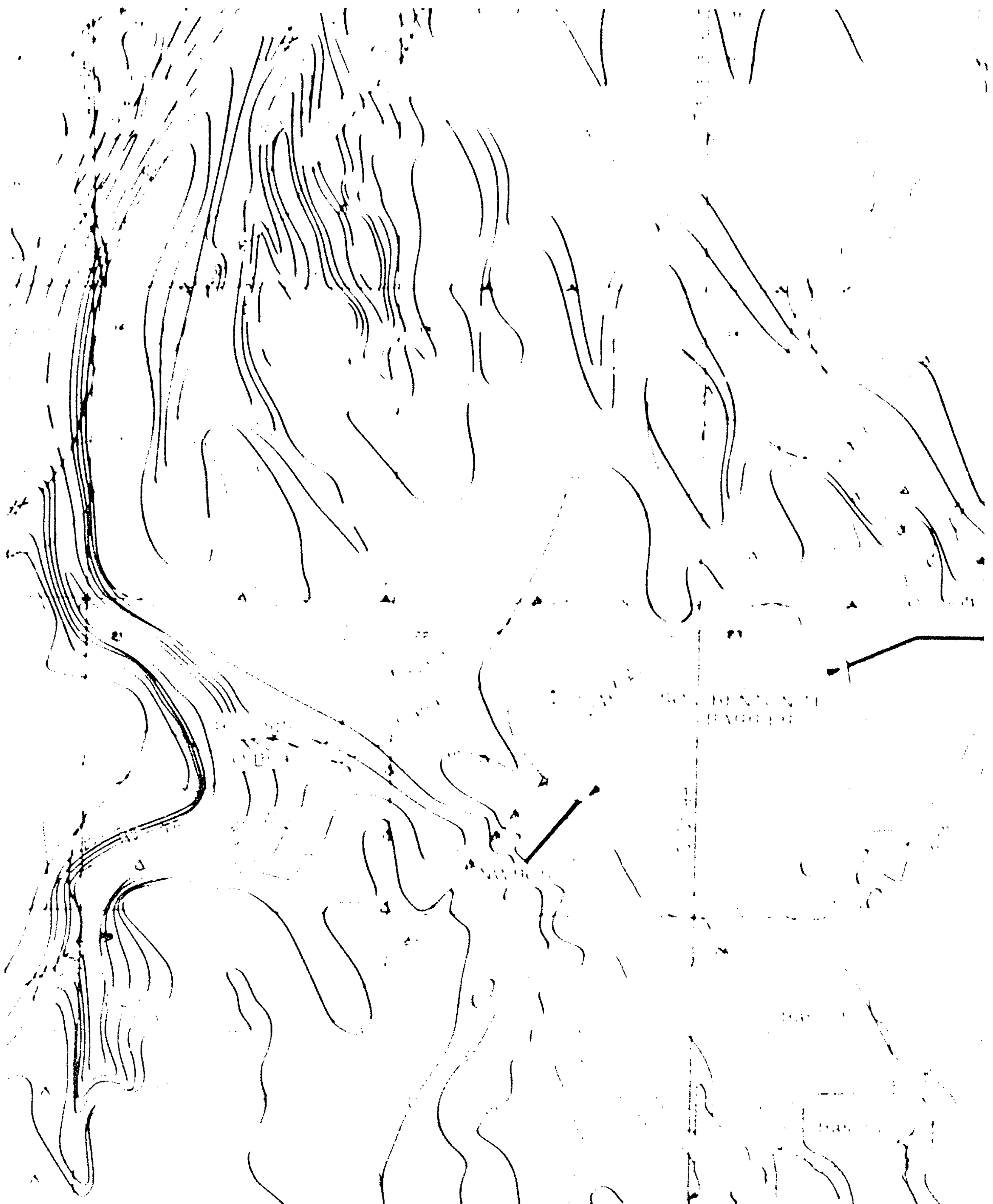
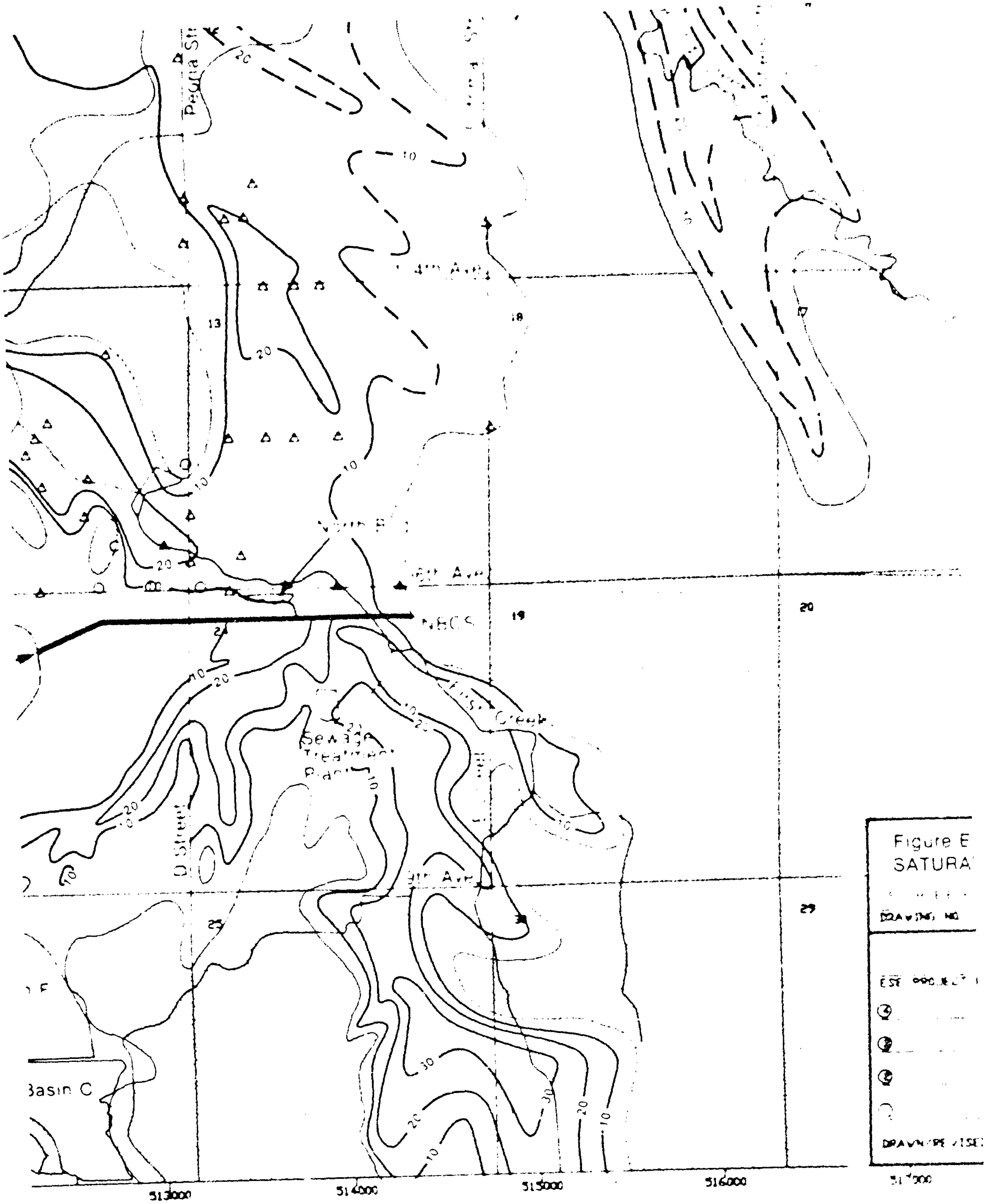
509000





Peoria St
14th Ave
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18
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North B
6th Ave
NBCS
19
20
24
Sewage
Treatment
Plant
Creek
D Street
8th Ave
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Figure E
SATURA
DRAWING NO
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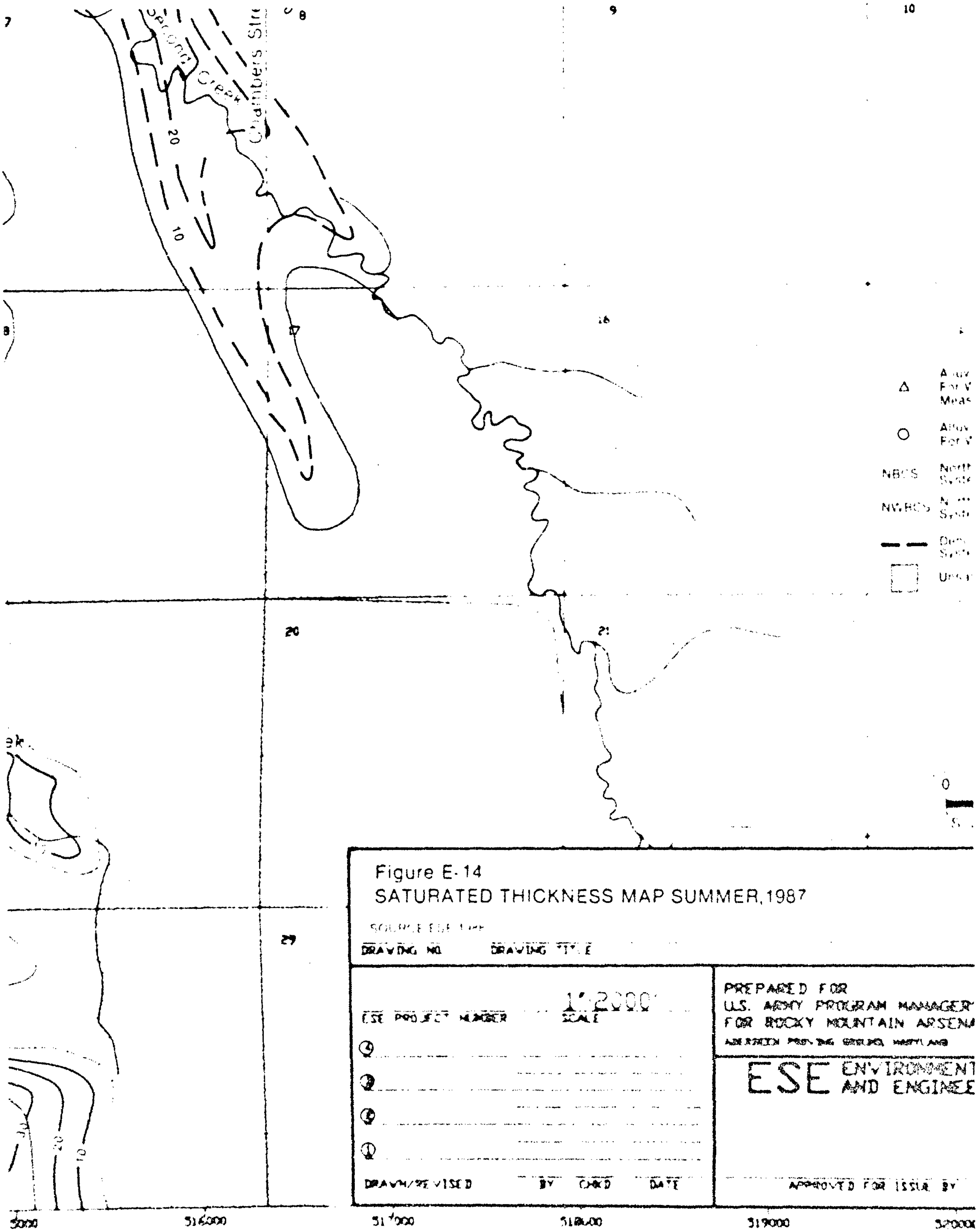


Figure E-14
SATURATED THICKNESS MAP SUMMER, 1987

DRAWING NO.   DRAWING TITLE

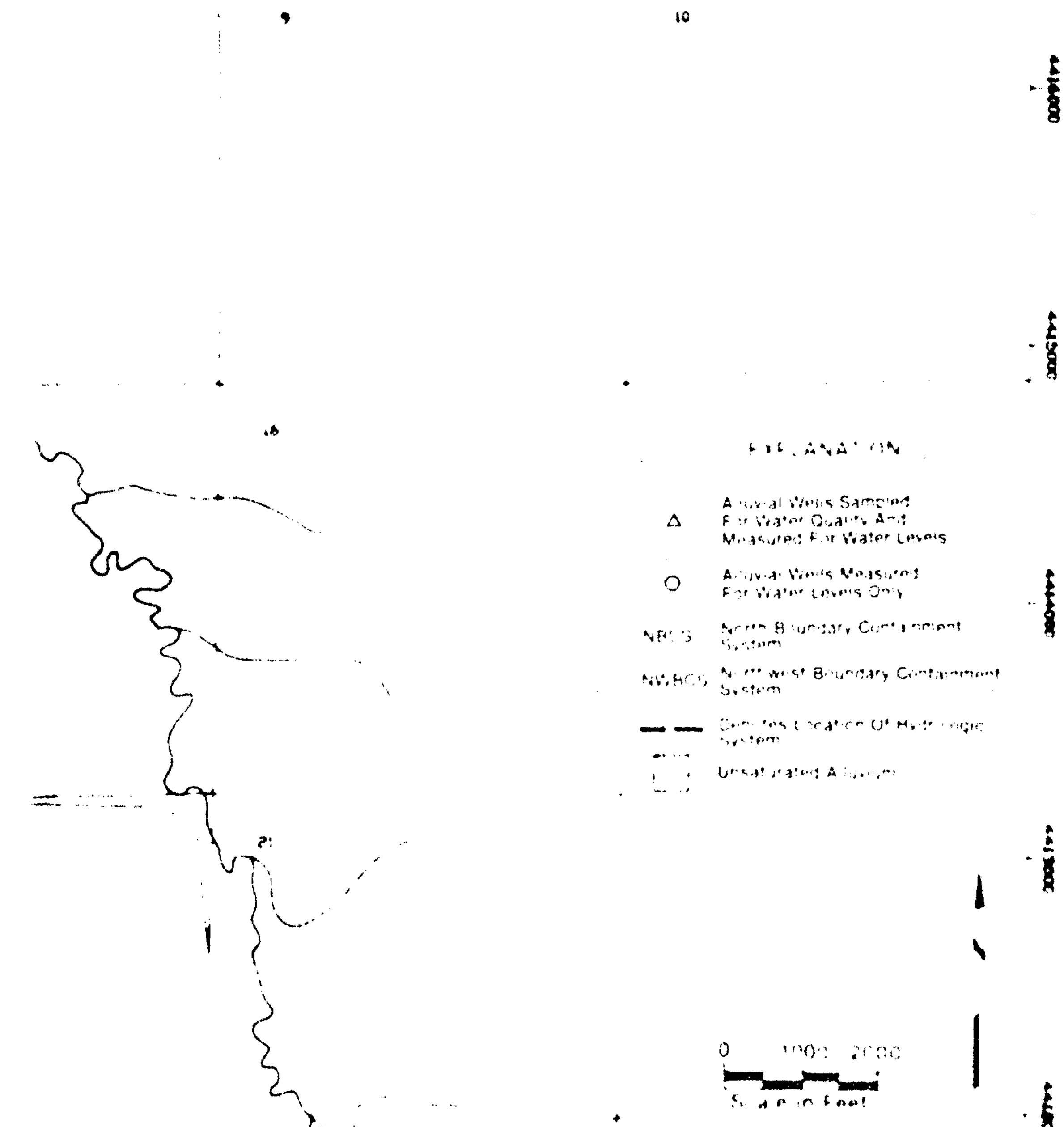
ESE PROJECT NUMBER   1"=2000'
SCALE

DRAWN/REVISED   BY   CHKD   DATE

PREPARED FOR
U.S. ARMY PROGRAM MANAGER
FOR ROCKY MOUNTAIN ARSENA
ABERDEEN PROVING GROUND, MARYLAND

ESE ENVIRONMENT AND ENGINEE

APPROVED FOR ISSUE BY



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RATED THICKNESS MAP SUMMER, 1987

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PREPARED FOR
U.S. ARMY PROGRAM MANAGER'S OFFICE
FOR ROCKY MOUNTAIN ARSENAL

ESE ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.

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APPROVED FOR ISSUE BY — DATE

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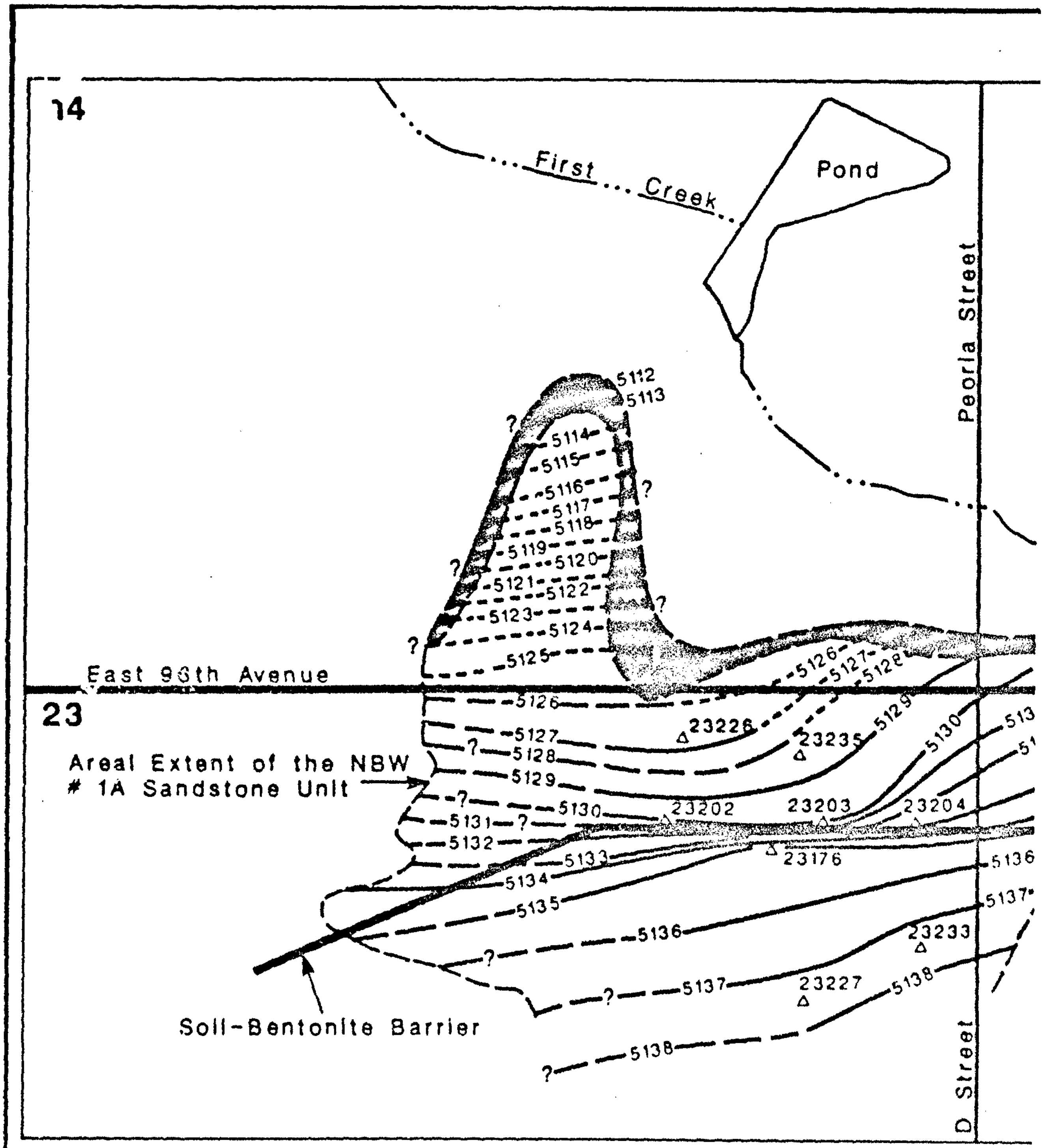
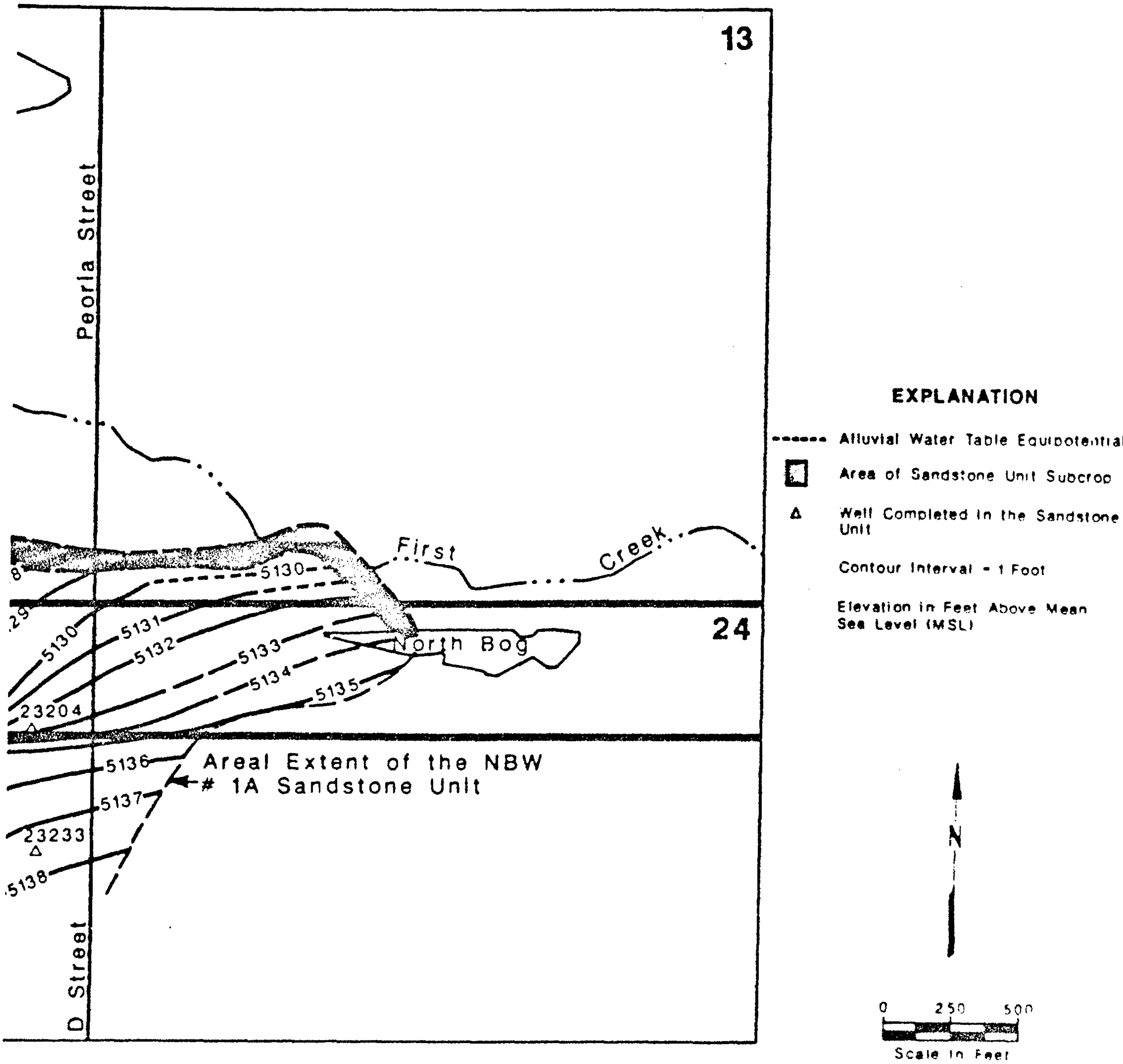


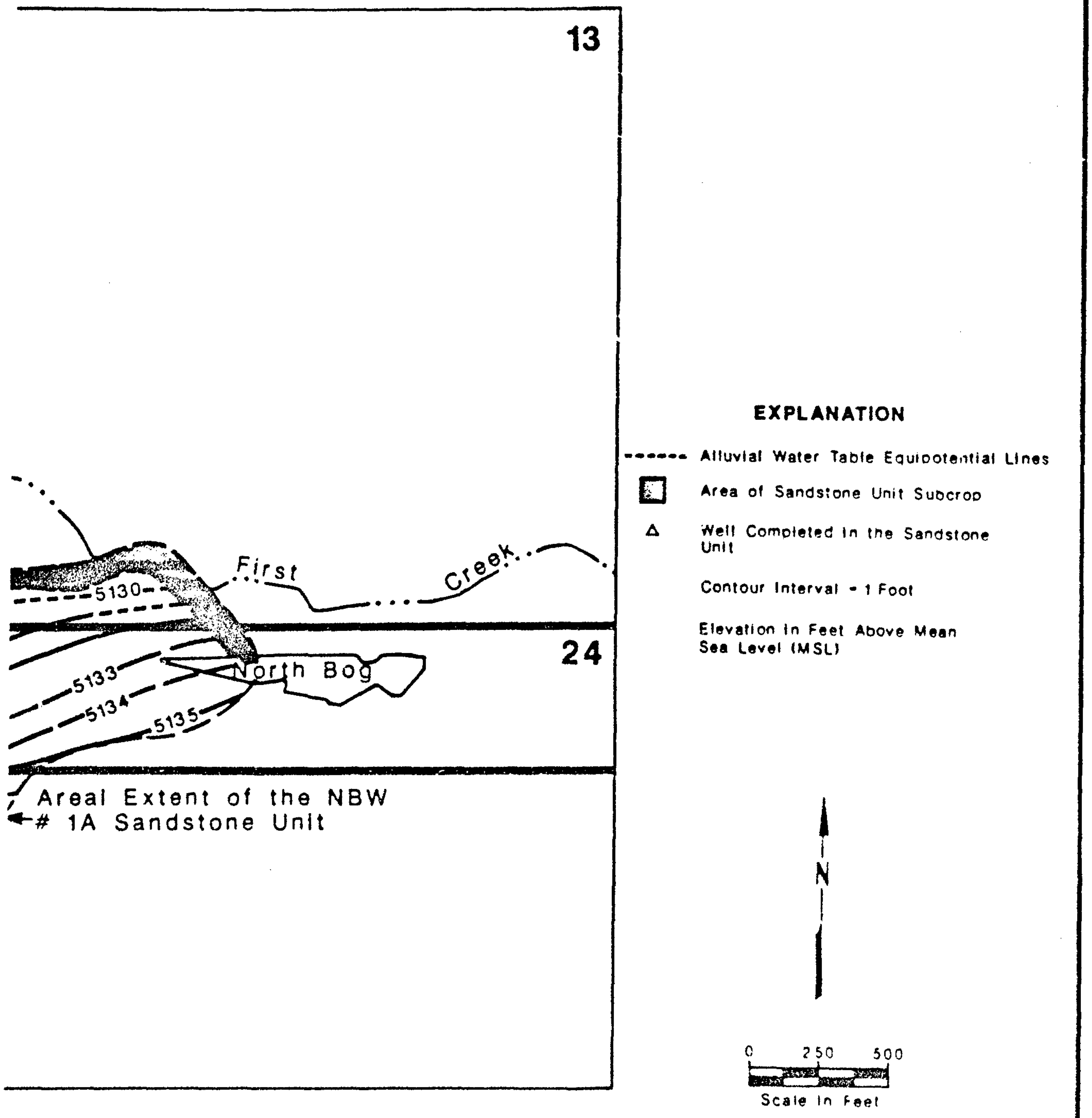
Figure E-15
POTENTIOMETRIC SURFACE MAP OF DENVER FM UNIT NBW#1A
FEBRUARY, 1988

SOURCE: HLA, 1988



Prepared for:
U.S. Army Program Manager's (
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

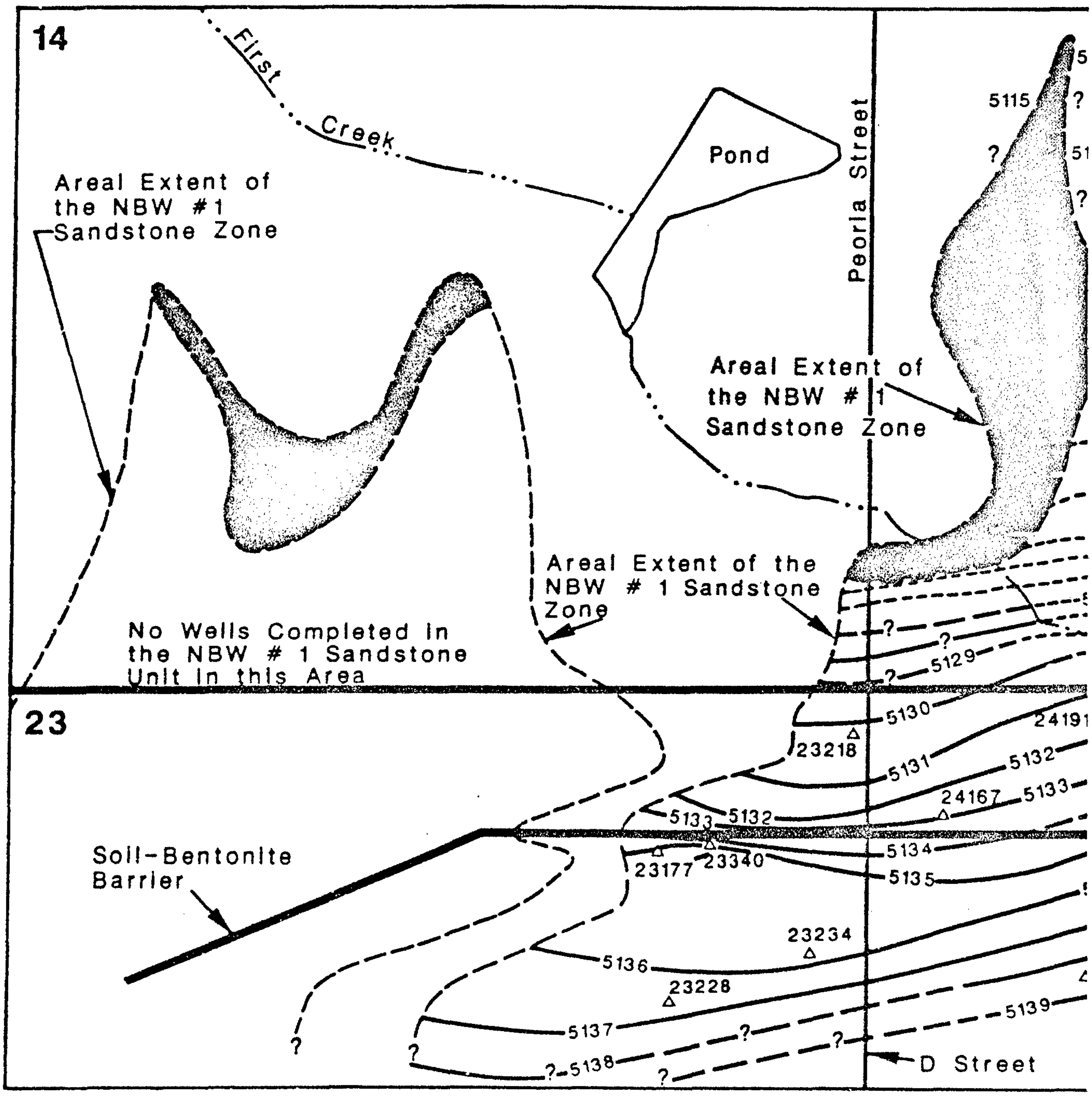
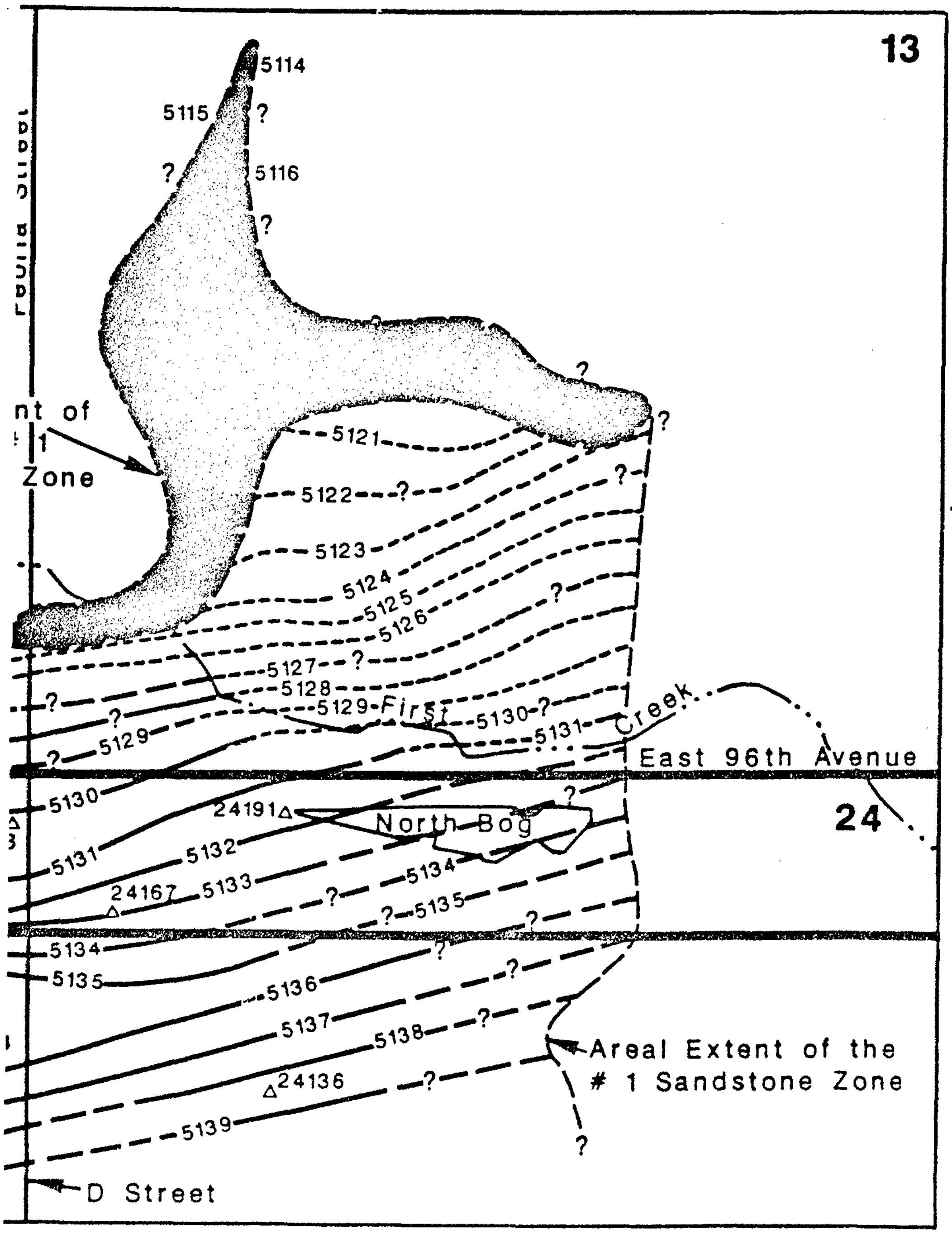


Figure E-16
POTENTIOMETRIC SURFACE MAP OF DENVER FM UNIT NBW#1
FEBRUARY, 1988

SOURCE. HLA, 1988



EXPLANATION

- Alluvial Water Table Equipote
- Area of Sandstone Unit Subc
- Well Completed In the Sands Unit

Contour Interval - 1 Foot

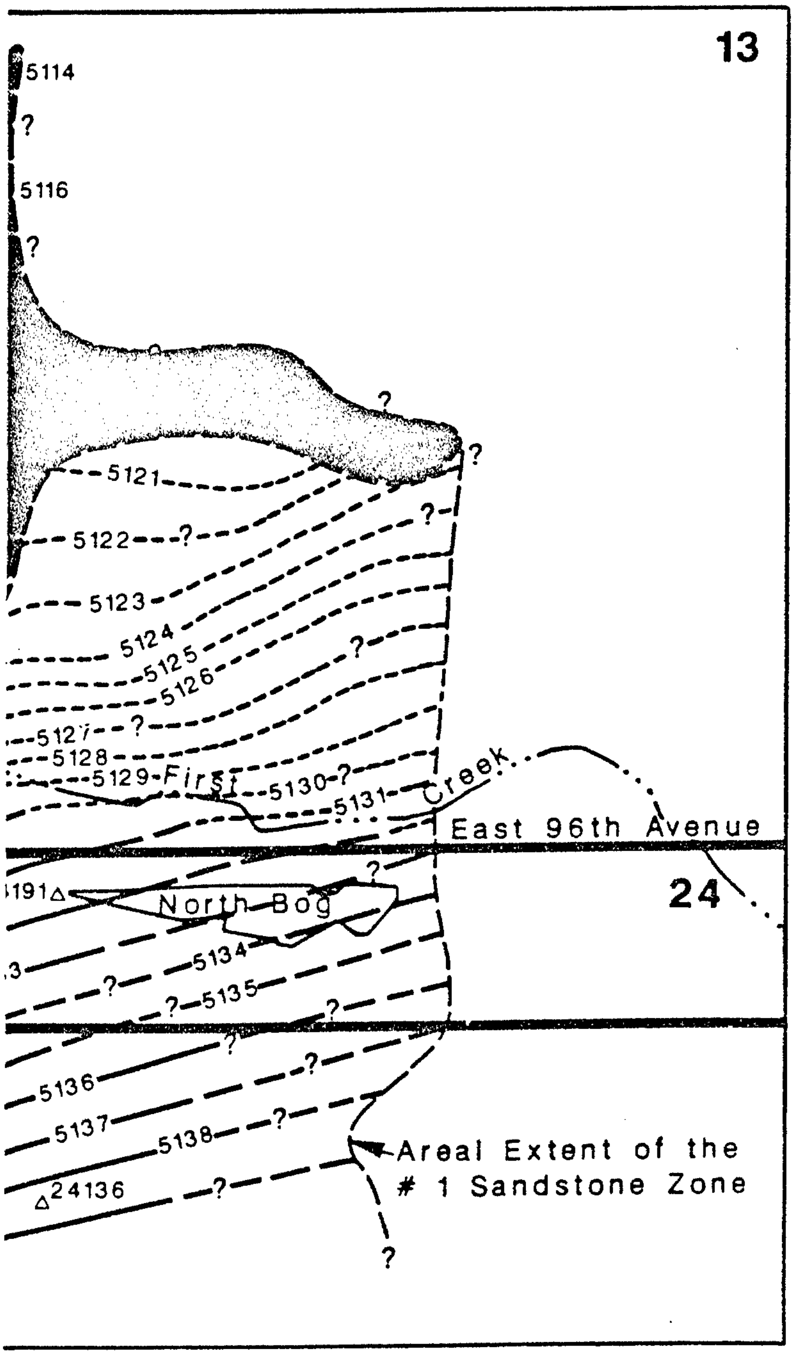
Elevation In Feet Above Mea Sea Level (MSL)

N

0 250 500
Scale In Feet

Prepared for:
U.S. Army Program Manage
For Rocky Mountain Arsena

Aberdeen Proving Ground, Maryland



EXPLANATION

- - - - - - Alluvial Water Table Equipotential Lines

Area of Sandstone Unit Subcrop

△ Well Completed in the Sandstone Unit

Contour Interval = 1 Foot

Elevation in Feet Above Mean Sea Level (MSL)

N

0 250 500

Scale in Feet

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

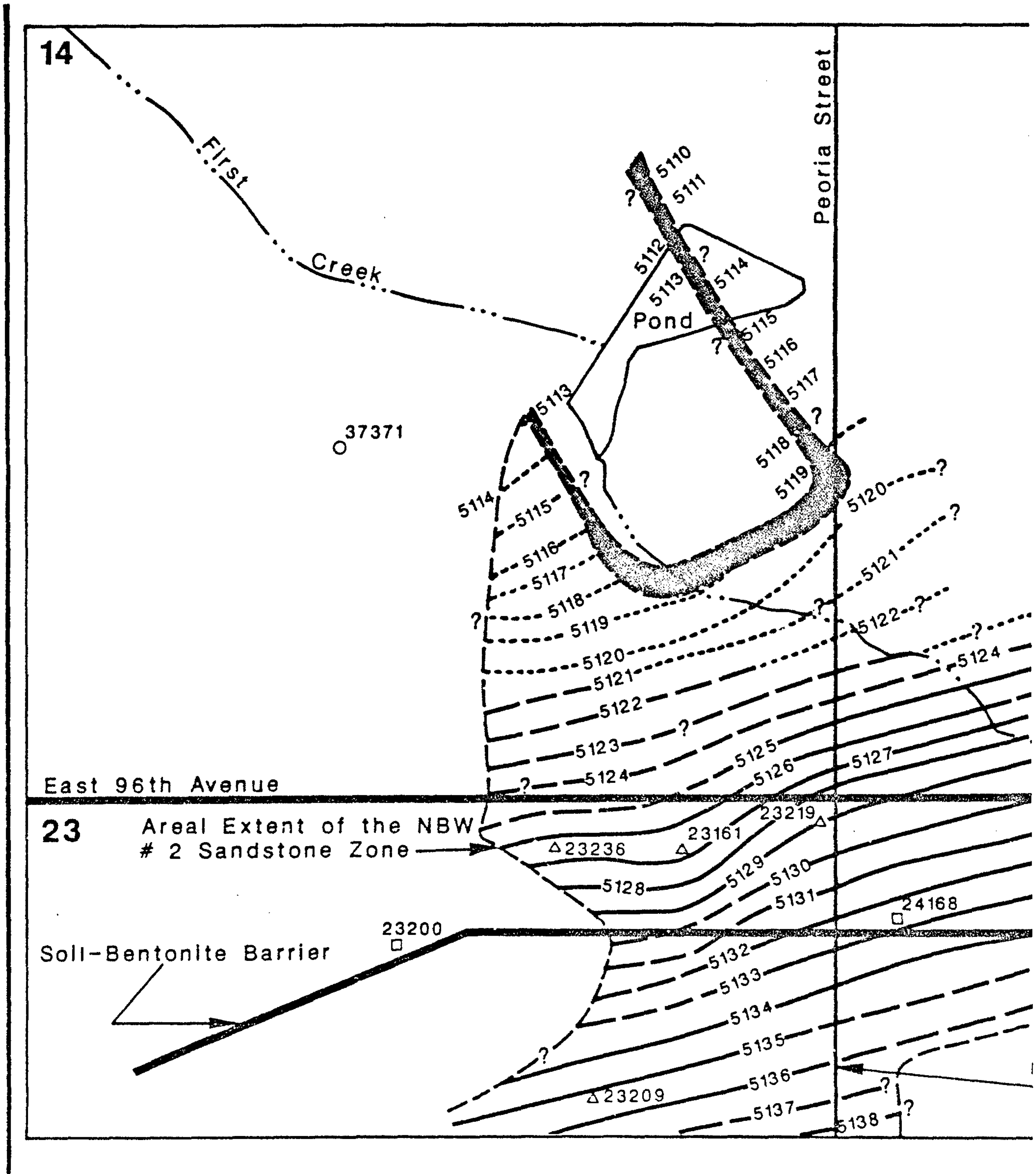
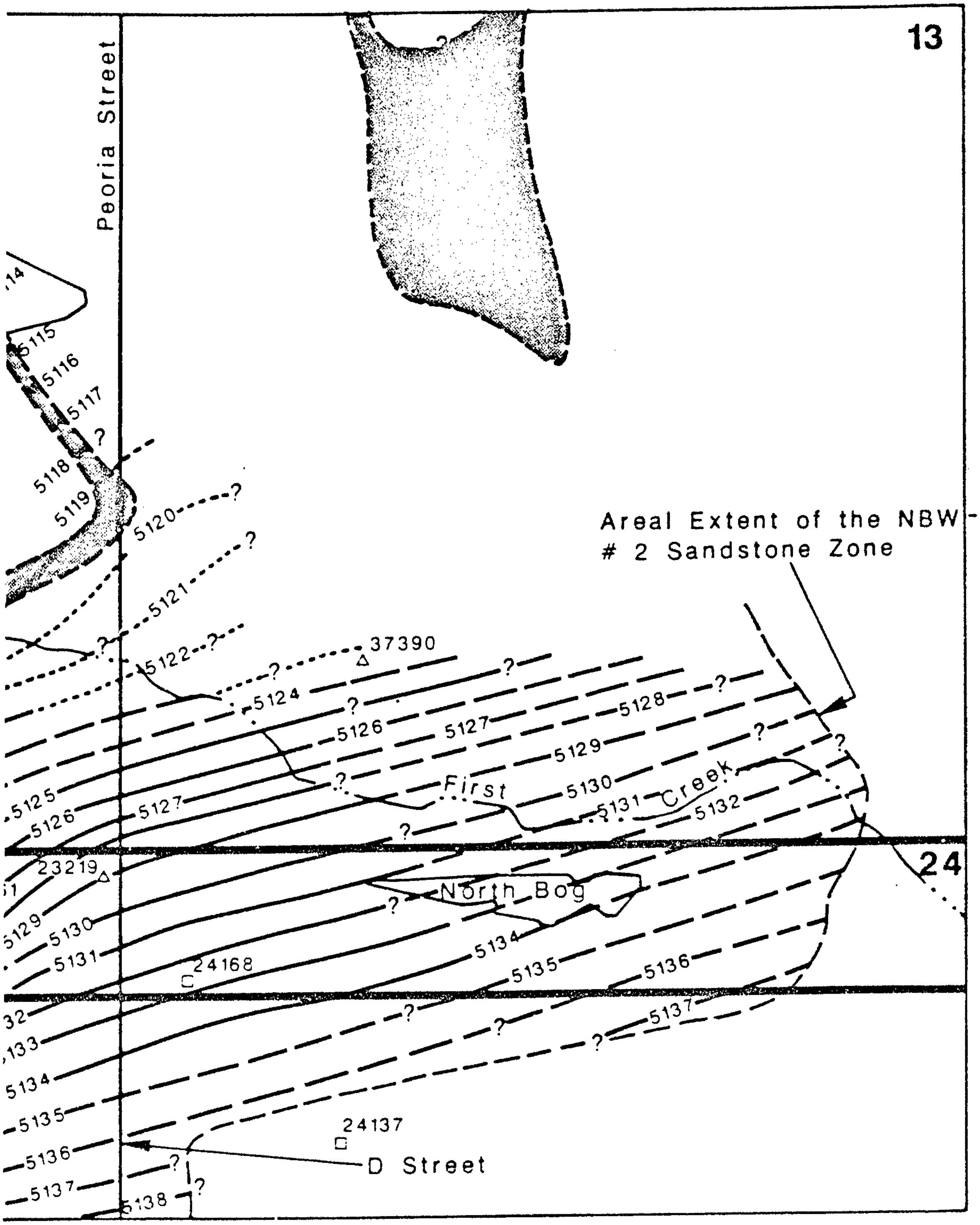


Figure E-17
POTENTIOMETRIC SURFACE MAP OF DENVER FM UNIT NBW#2
FEBRUARY, 1988

SOURCE: HLA, 1988



EXPLANA

Alluvial Water Tat

Area of Sandston

Well Completed ir Unit Proper

Well Completed E Unit but Exhibitir

Well Completed C the Sandstone Ui the Sandstone Ui

Contour Interval

Elevation in Feet Sea Level (MSL)

N

0 250

Scale In I

3W#2

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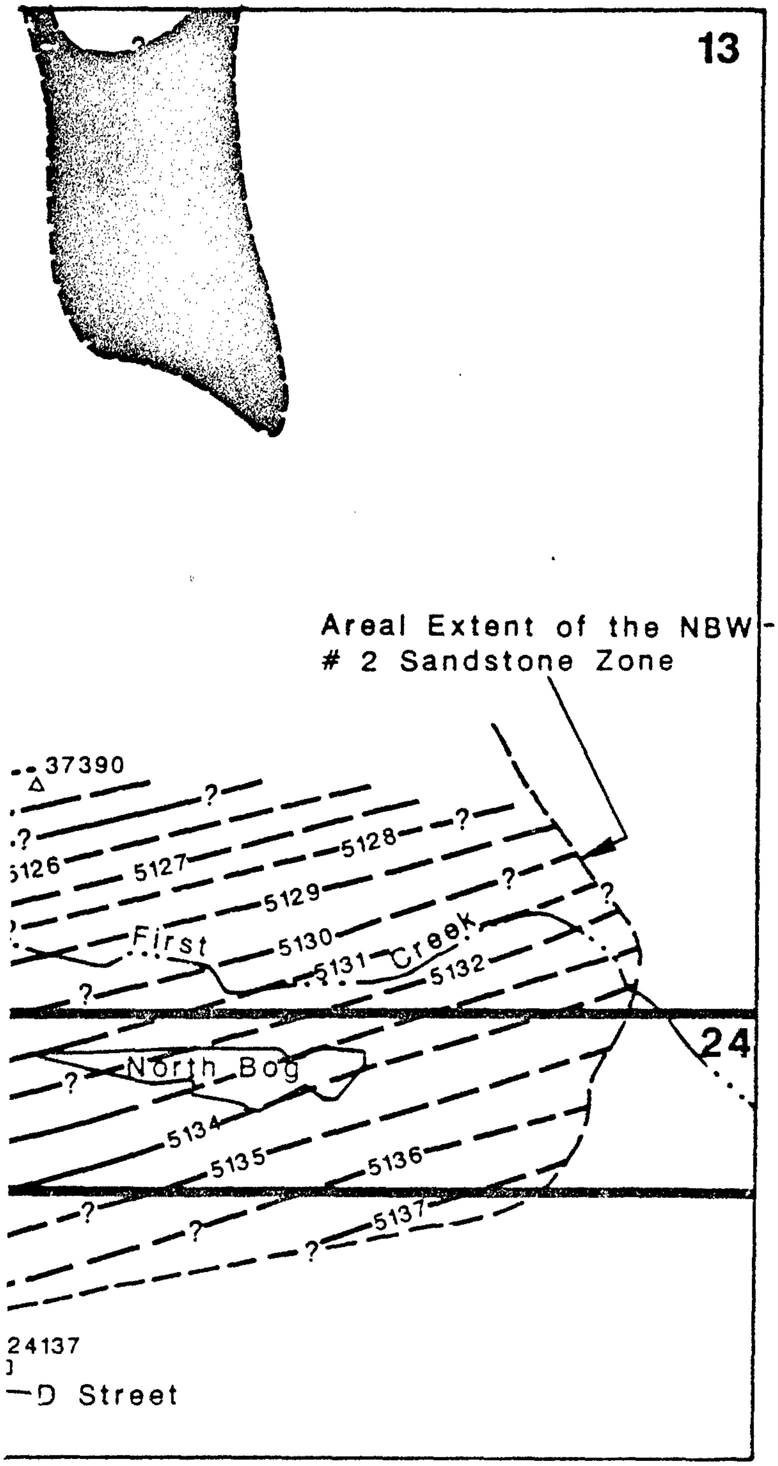
For Rocky Mountain

Aberdeen Proving Ground, M



EXPLANATION

Alluvial Water Table Equipotential Lines

Area of Sandstone Unit Subcrop

Δ Well Completed in the Sandstone Unit Proper

□ Well Completed Below the Sandstone Unit but Exhibiting Hydrologic Connection

○ Well Completed Outside the Areal Extent of the Sandstone Unit but Correlated to the Sandstone Unit

Contour Interval = 1 Foot

Elevation in Feet Above Mean Sea Level (MSL)

N

0 250 500

Scale in Feet

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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

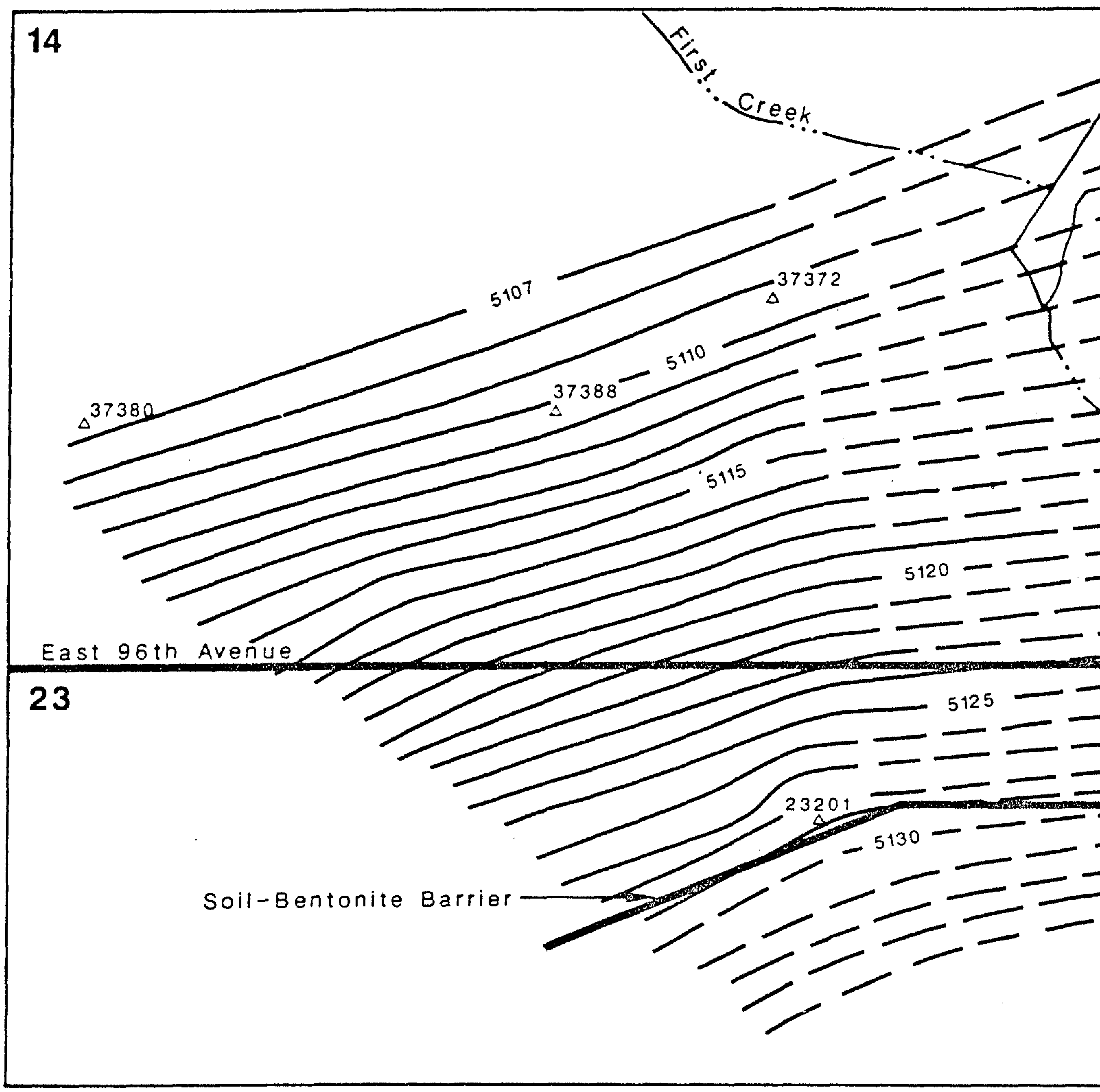
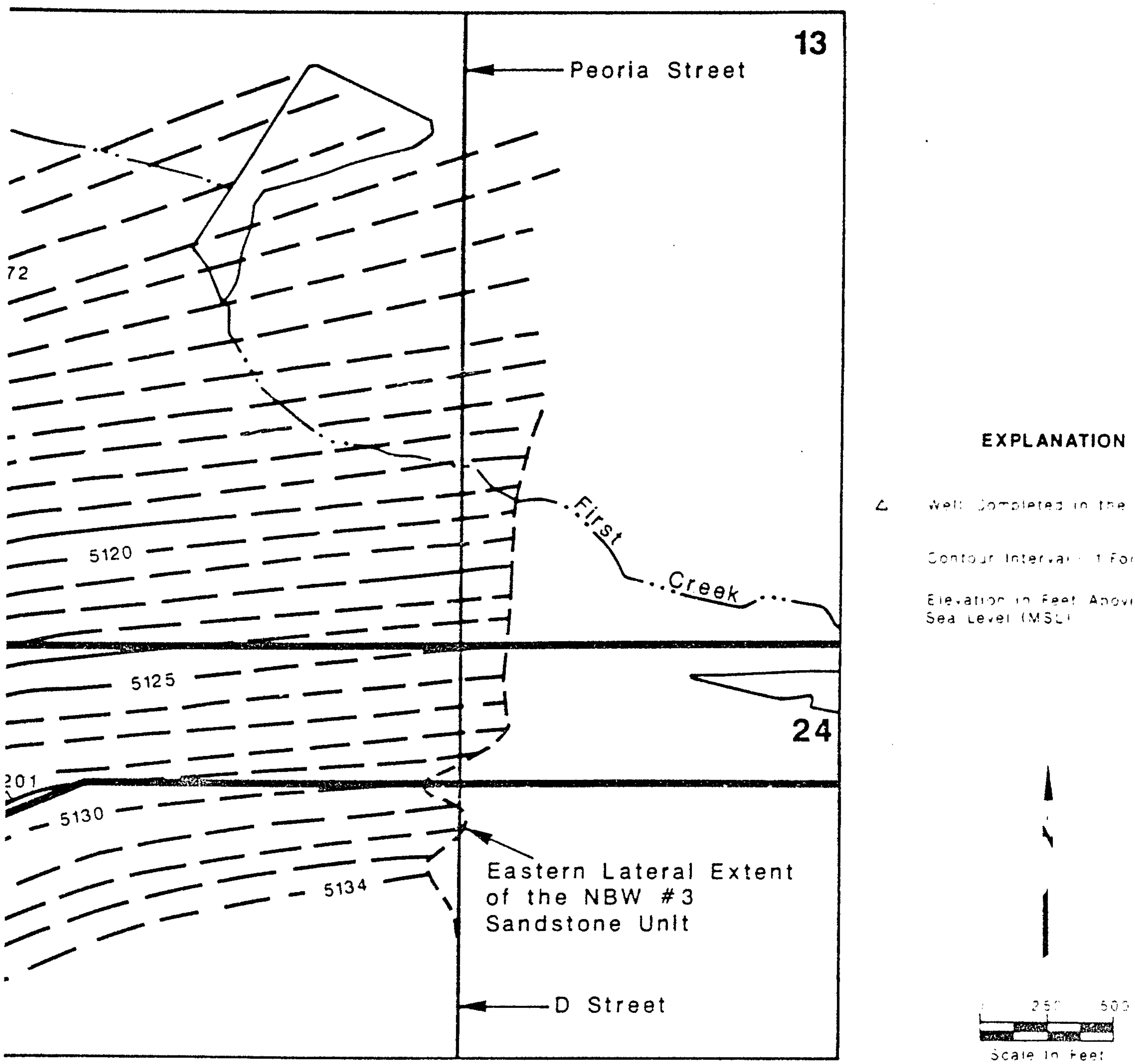


Figure E-18
POTENTIOMETRIC SURFACE MAP OF DENVER FM UNIT NBW#3
FEBRUARY, 1988



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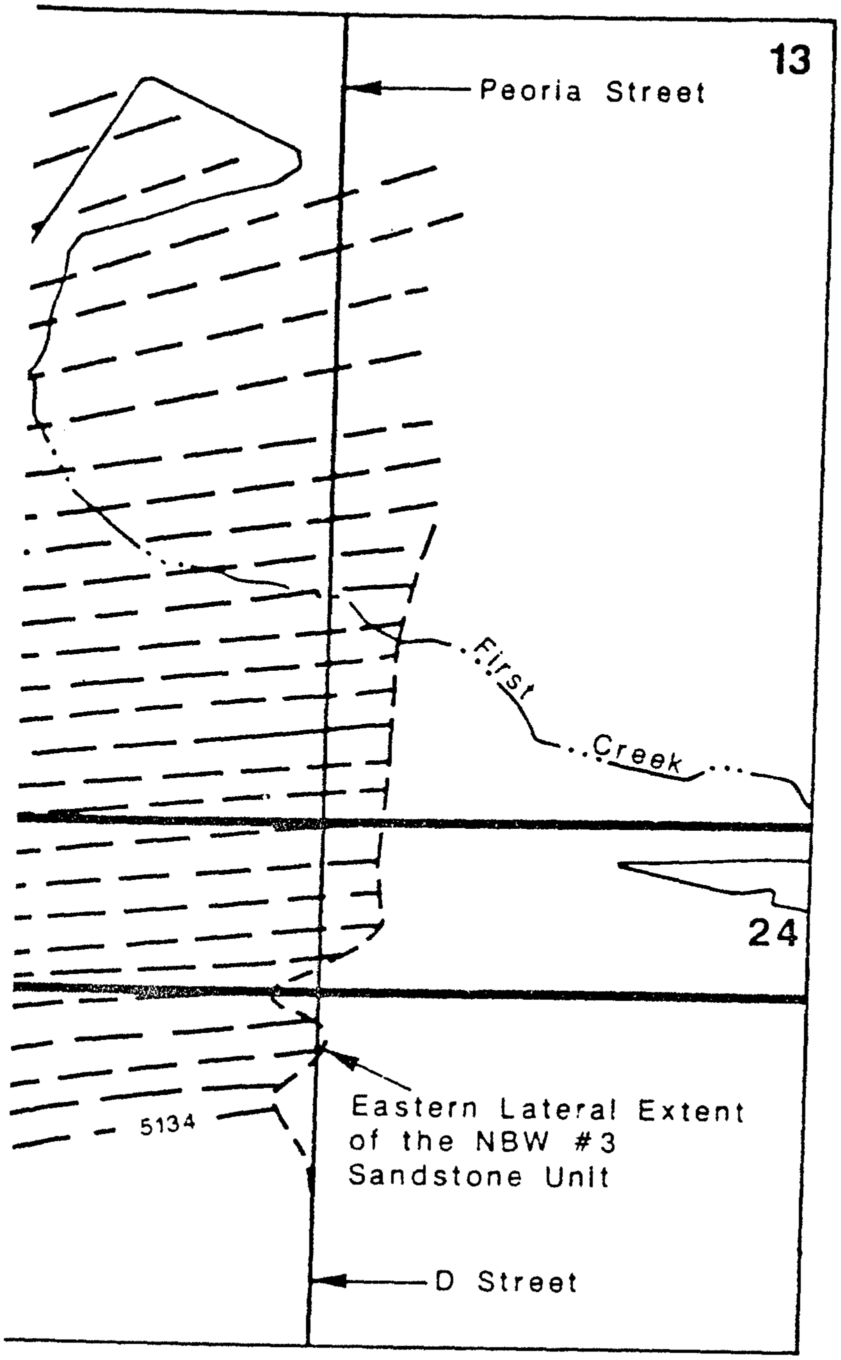
U.S. Army Program Mana
For Rocky Mountain Arse

Aberdeen Proving Ground, Mar



EXPLANATION

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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

APPENDIX F
CONTAMINANT DISTRIBUTION MAPS, CONTAMINANT POINT PLOTS,
AND WATER QUALITY DATA

F.1 CONTAMINANT DISTRIBUTION AND POINT PLOT MAPS

ALLUVIAL AQUIFER

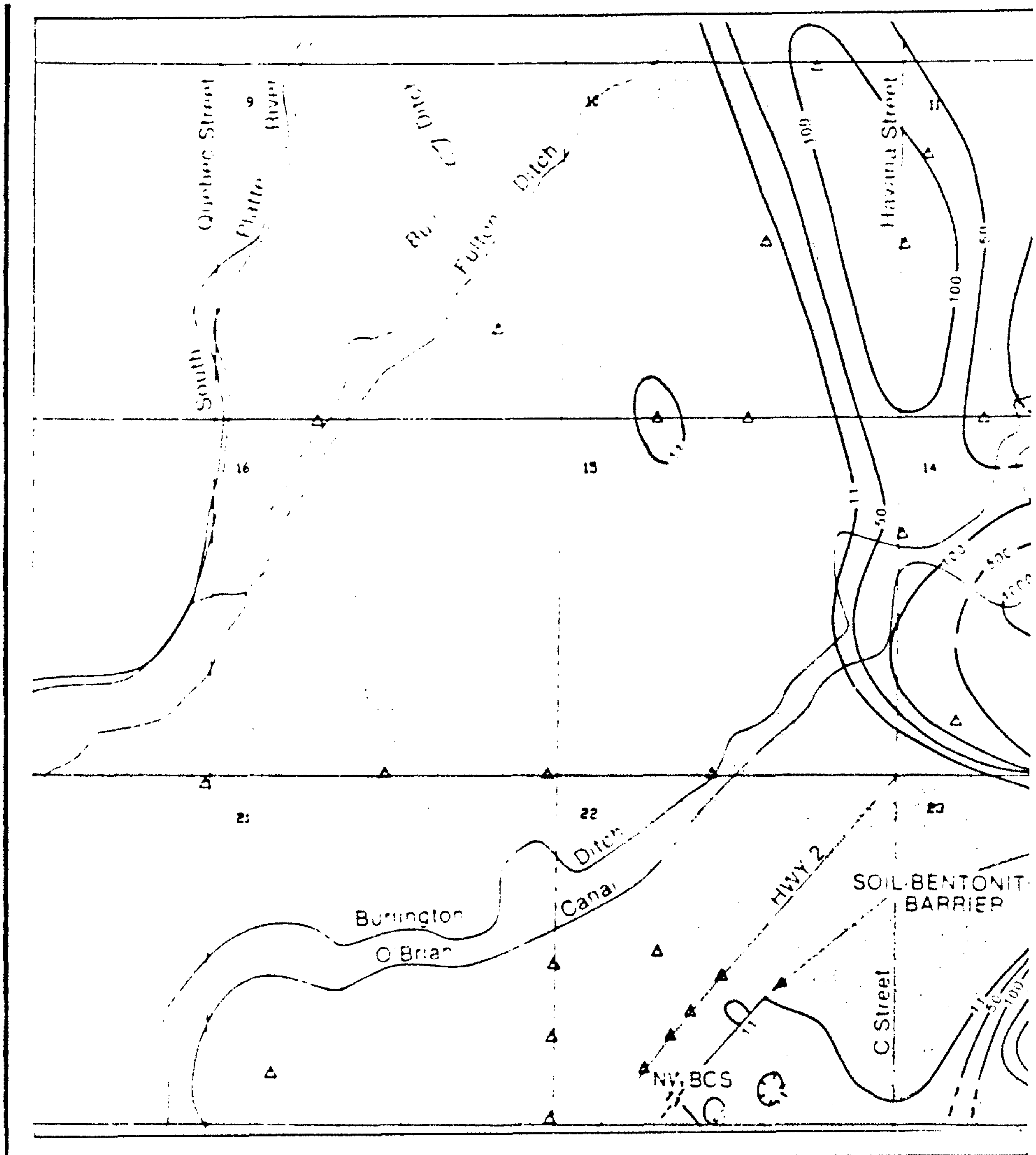
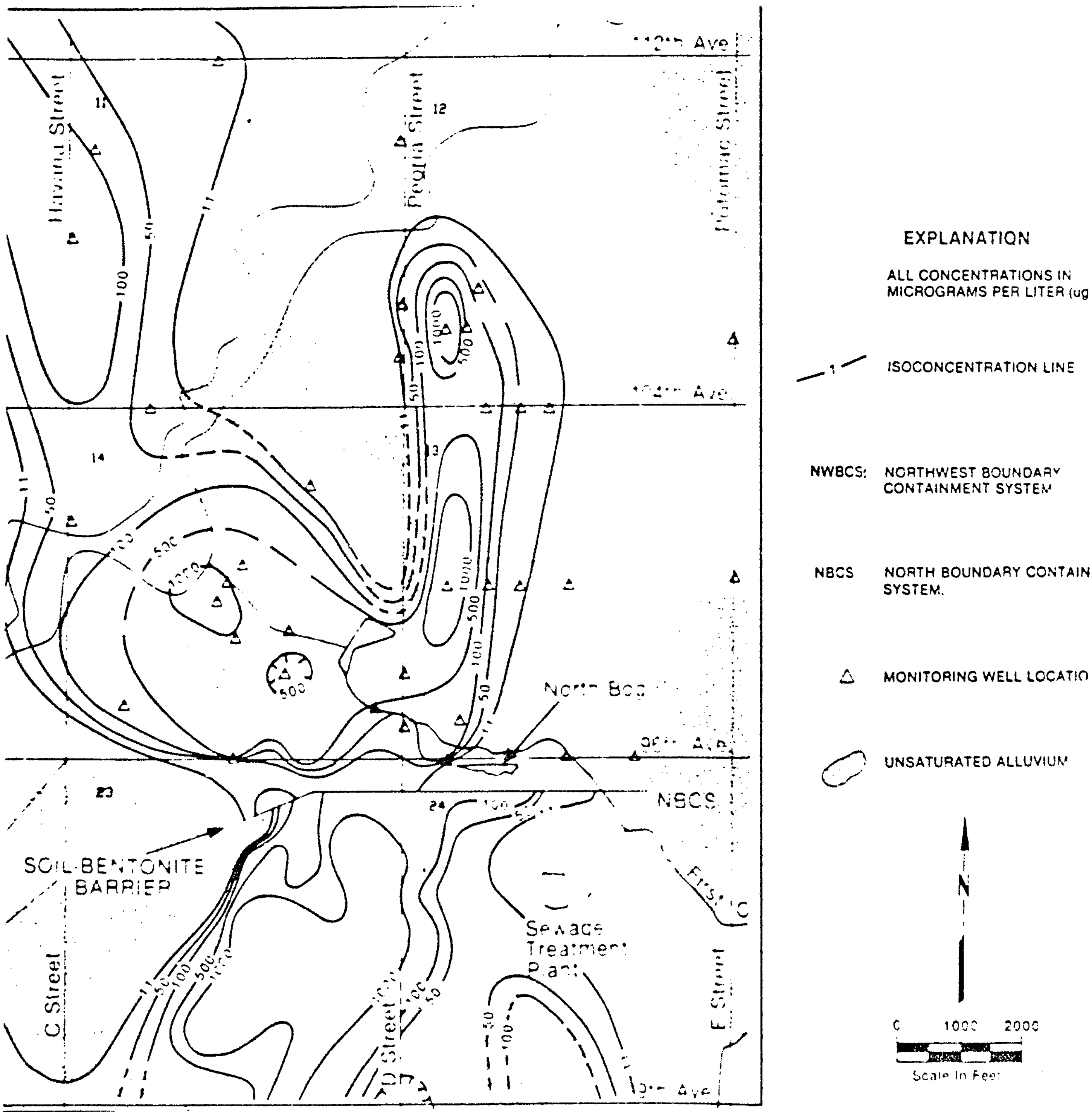


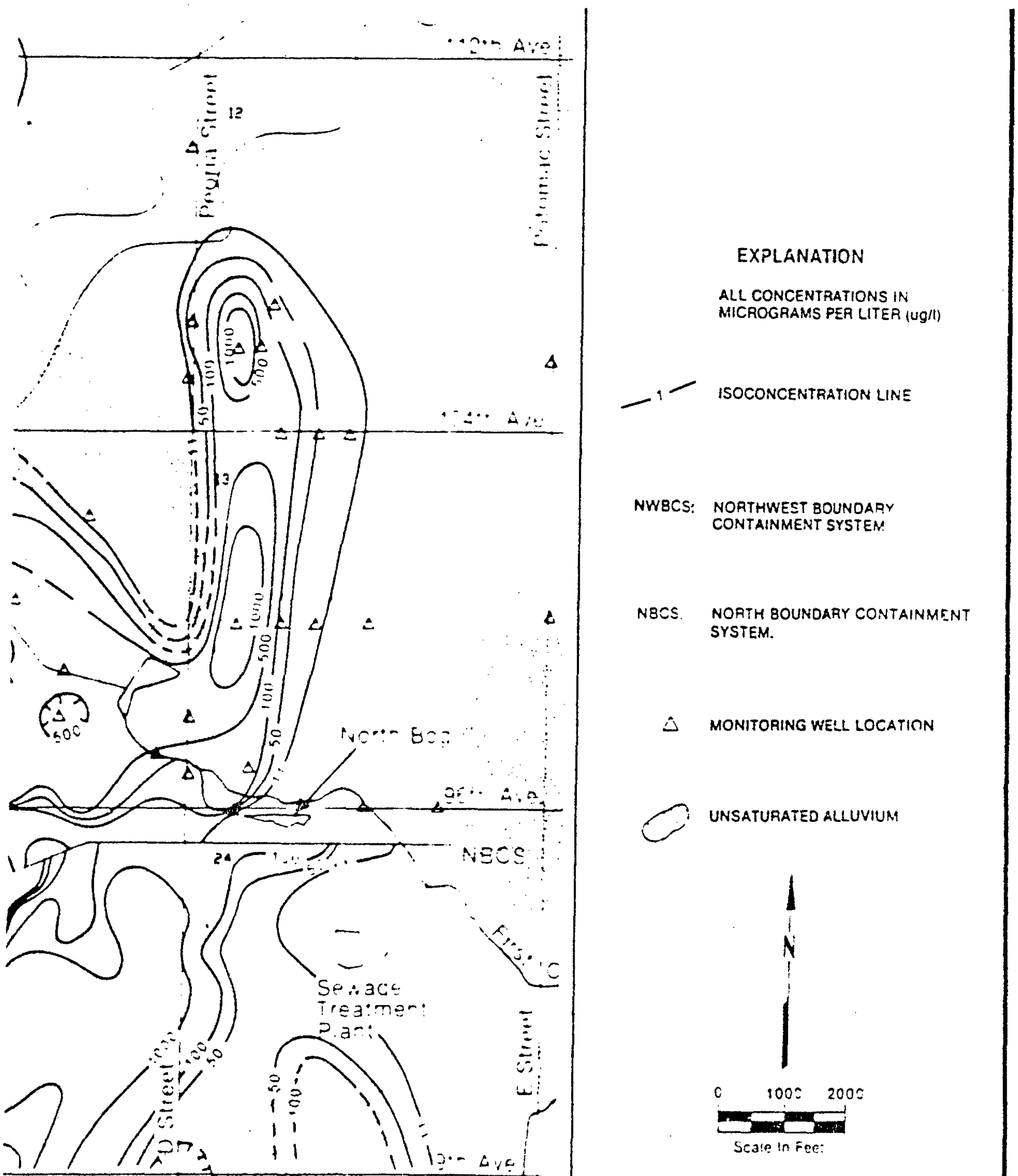
Figure F-1
DIMP CONCENTRATION DISTRIBUTION, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



Prepared for:
U.S. Army Program Manager's (
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

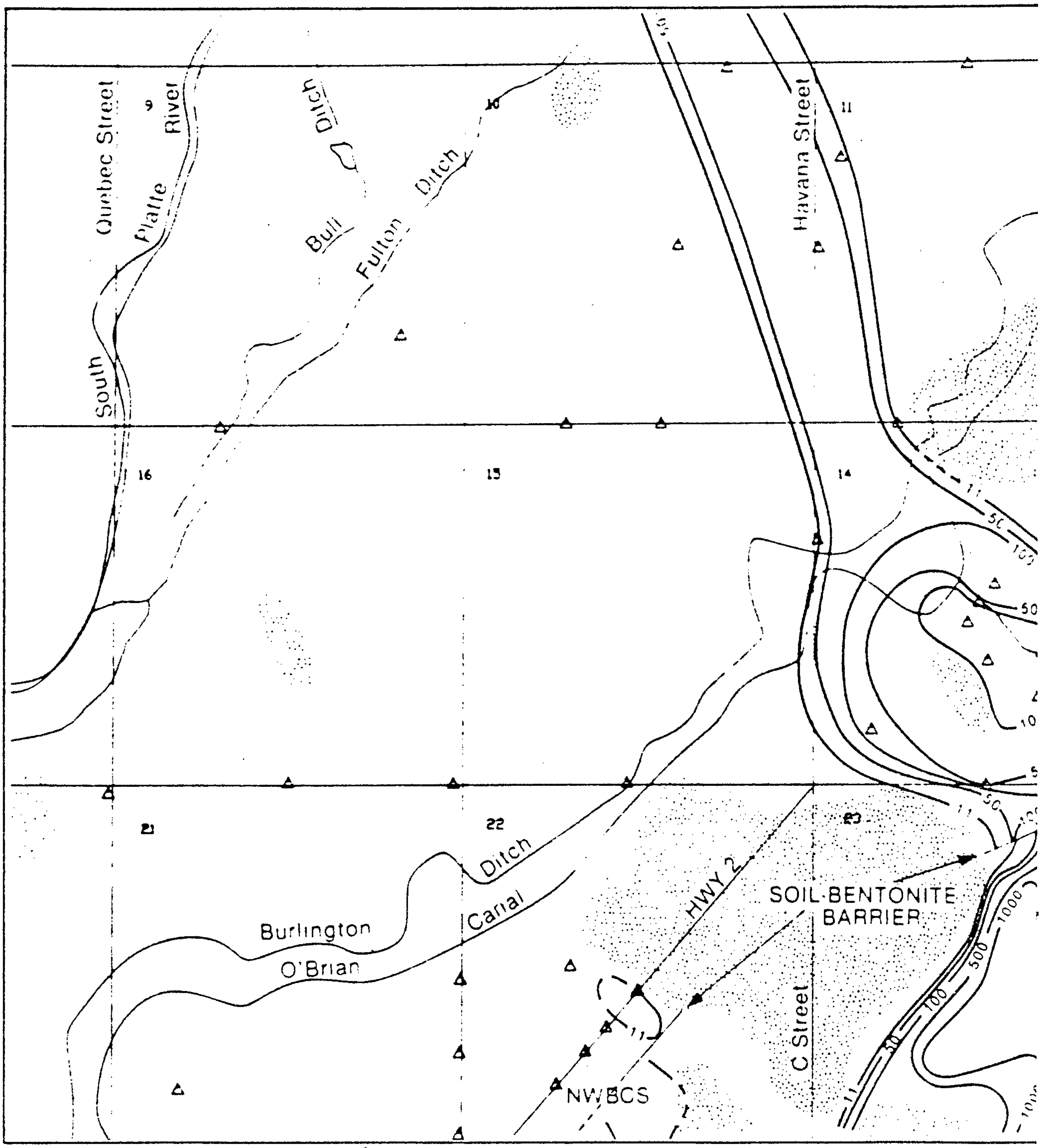
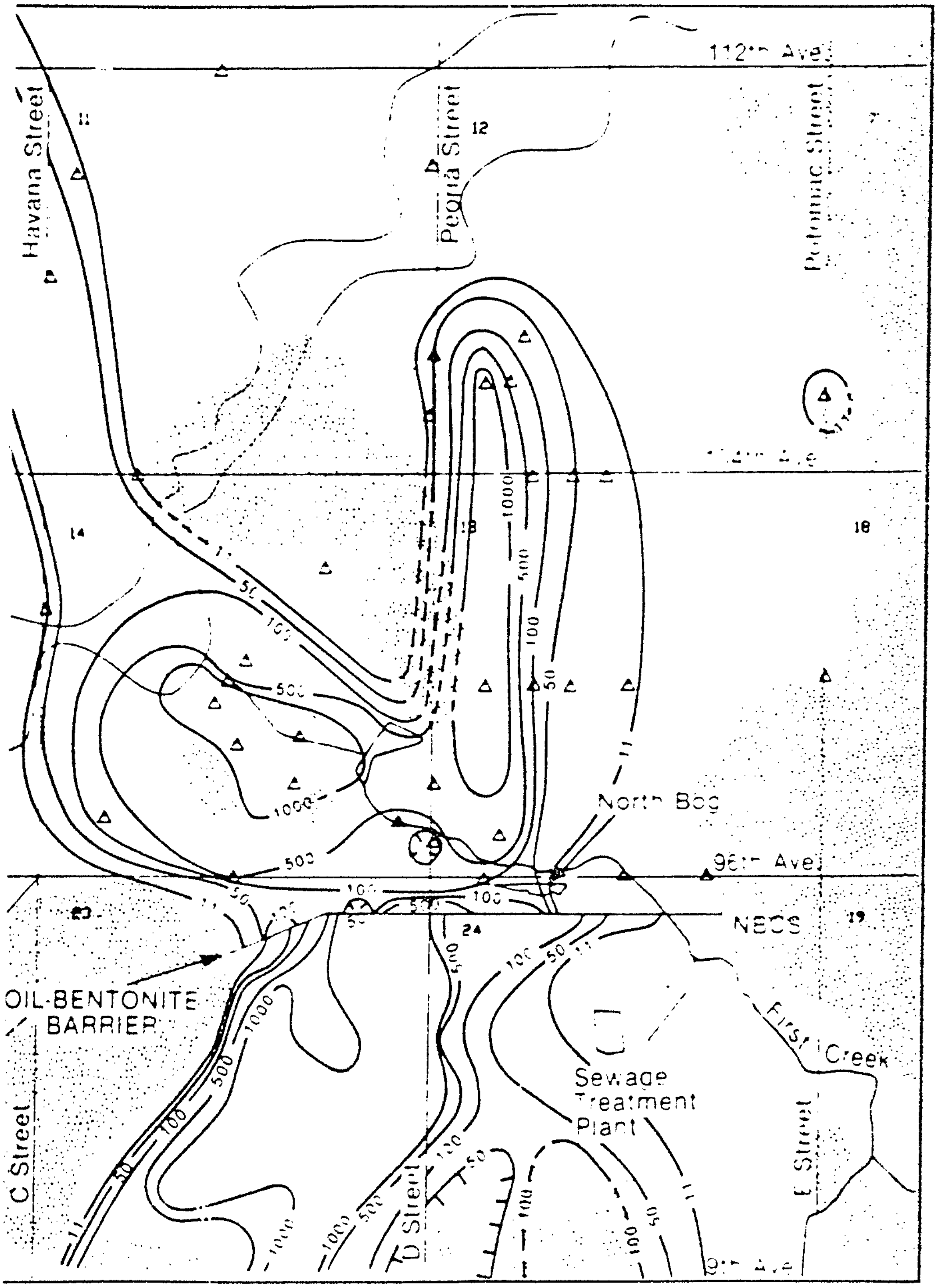


Figure F-2
DIMP CONCENTRATION DISTRIBUTION, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



EXPLANATION

ALL CONCENTRATIONS I
MICROGRAMS PER LITEF

ISOCONCENTRATION LI

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONT SYSTEM.

MONITORING WELL LOCA

UNSATURATED ALLUVIU

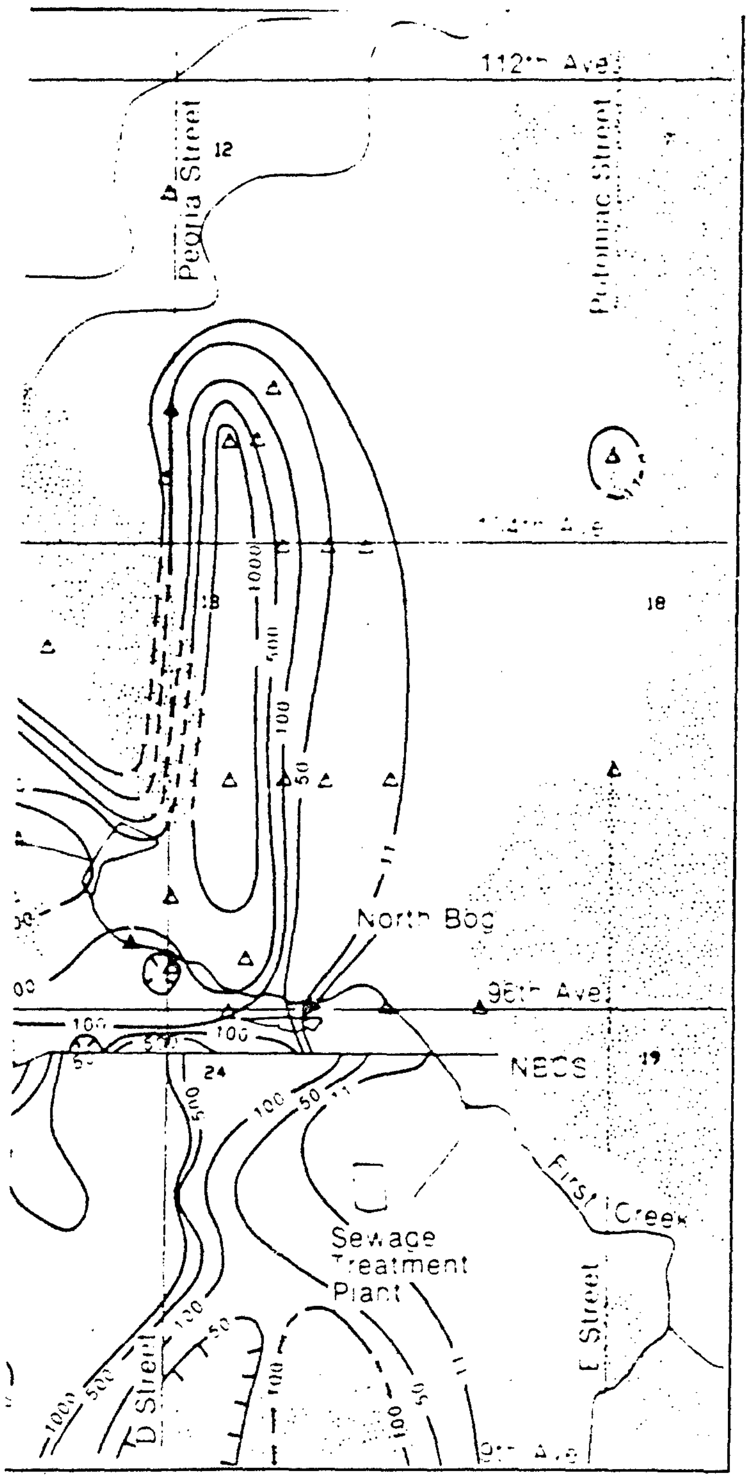
N

0 1000 2000

Scale In Feet

Prepared for:
U.S. Army Program Manager'
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



EXPLANATION

ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l)

ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale in Feet

Prepared for:
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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

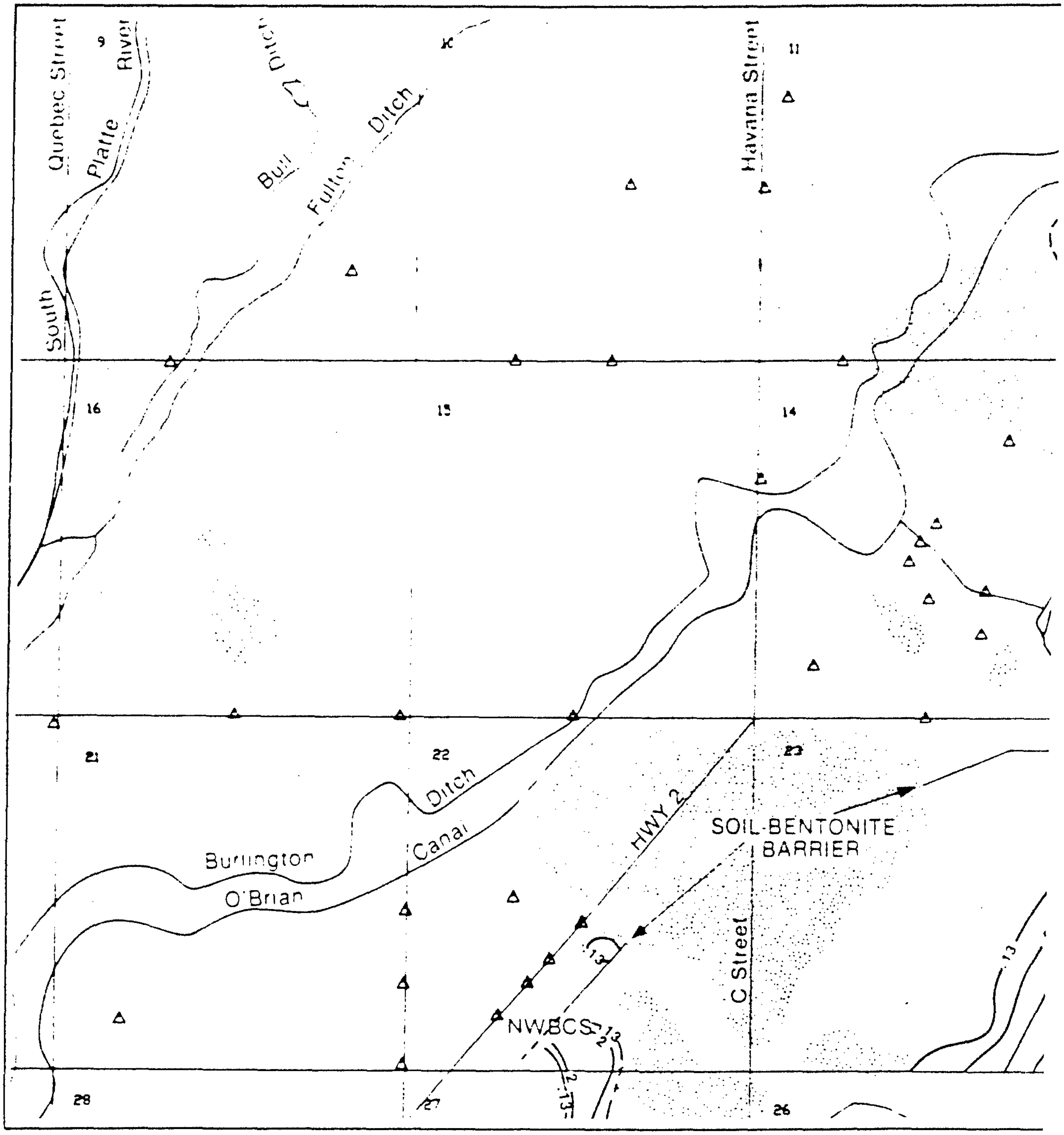
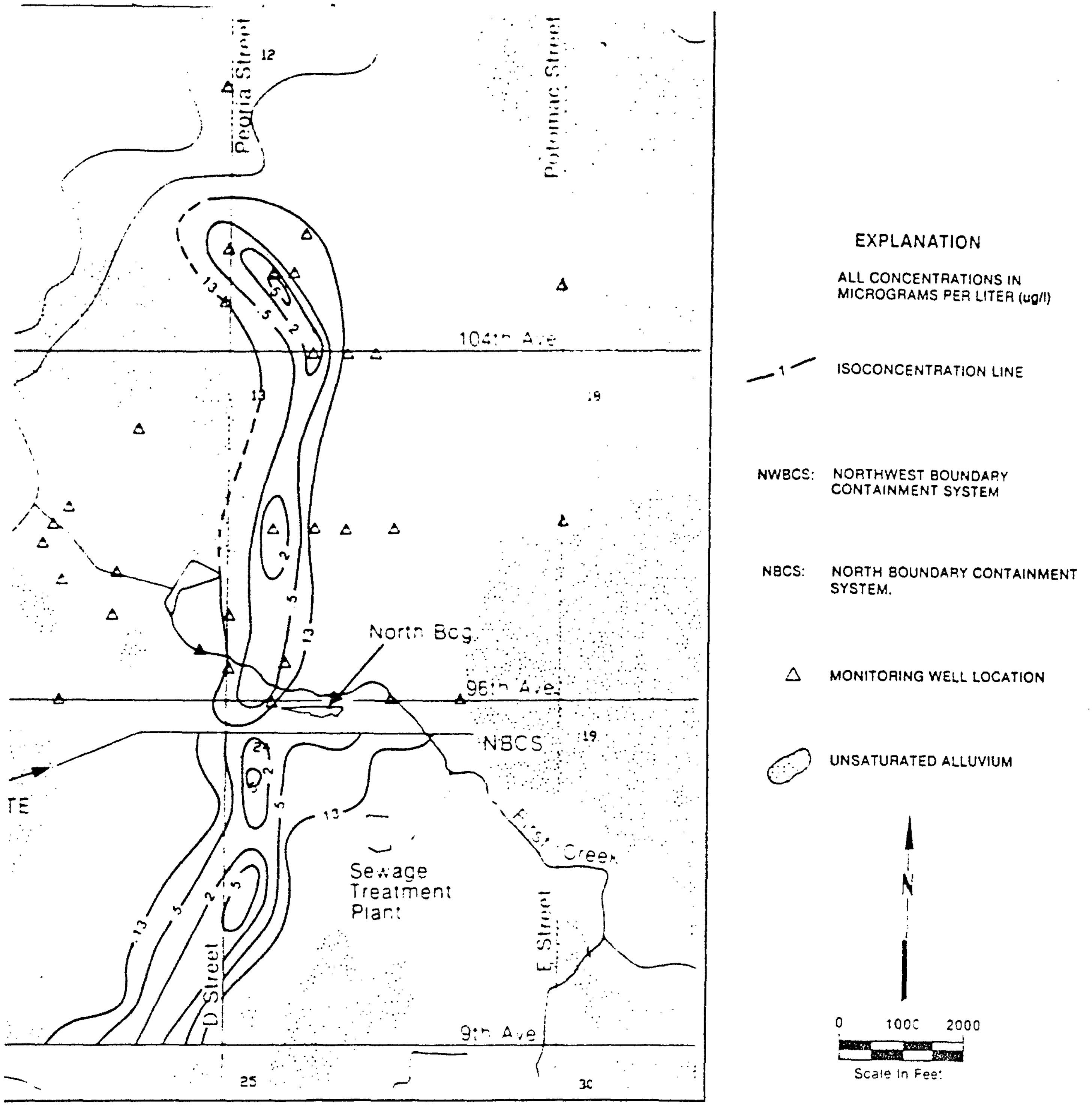


Figure F-3
DBCP CONCENTRATION DISTRIBUTION, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1987



Prepared for:
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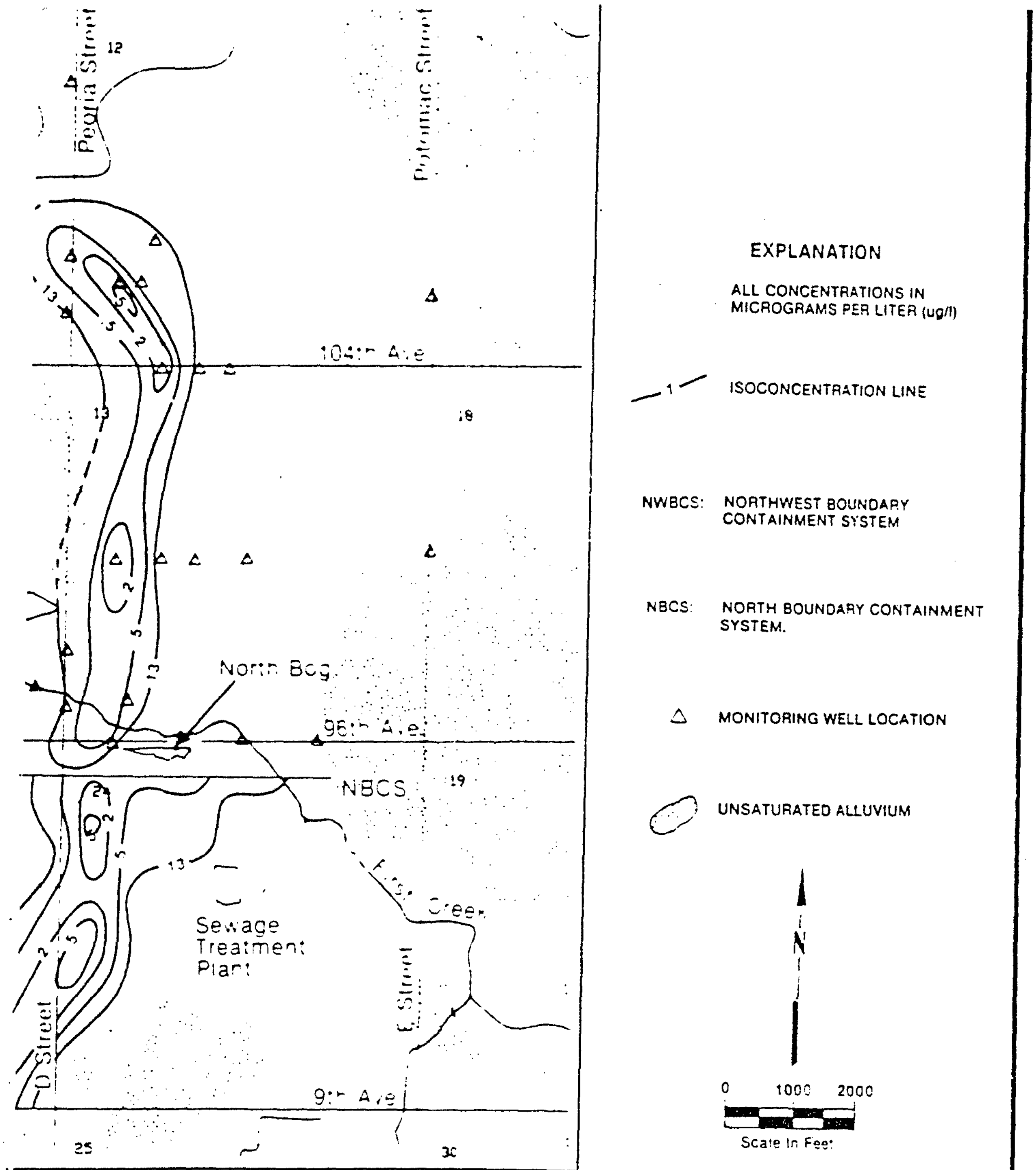
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

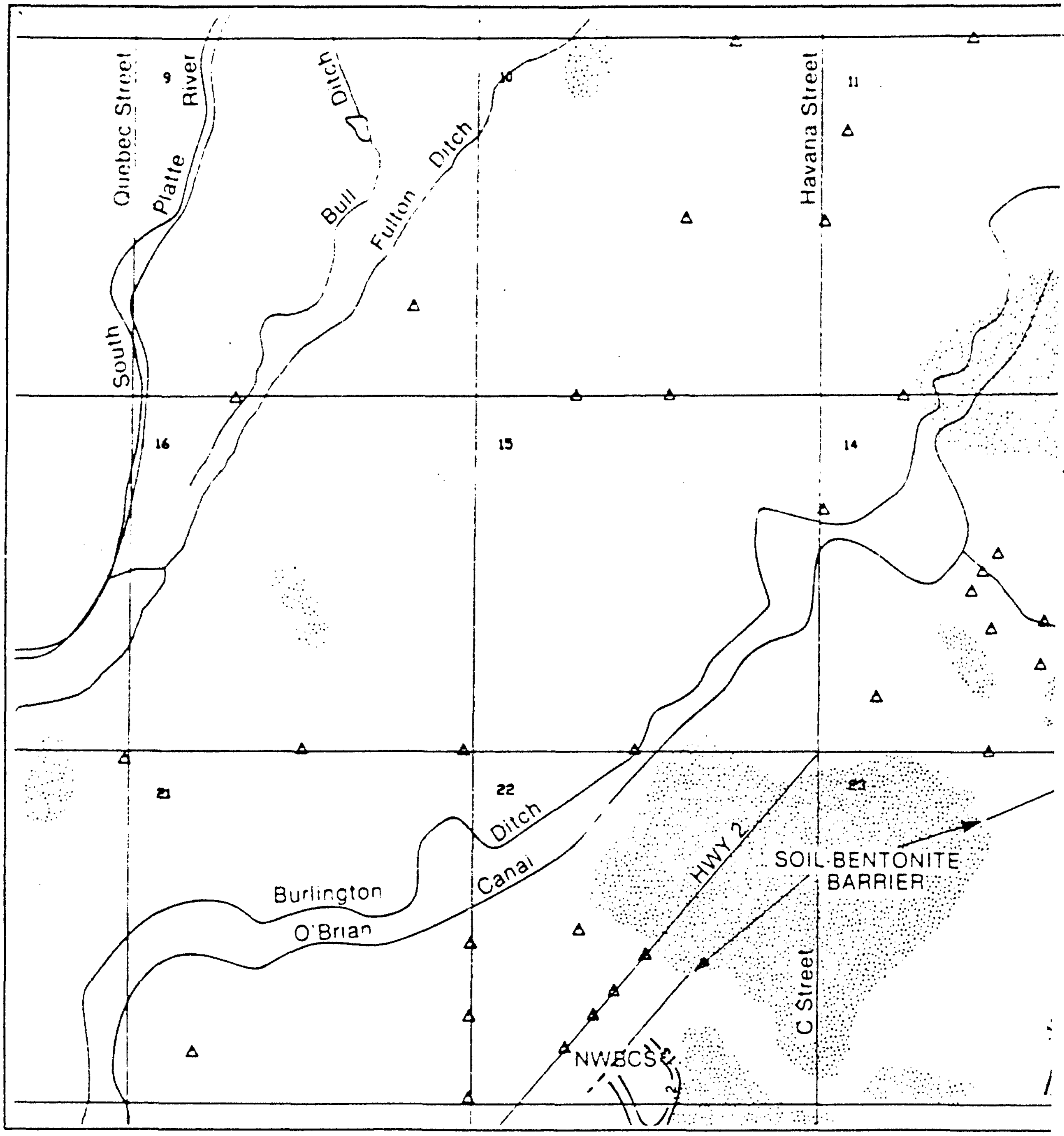
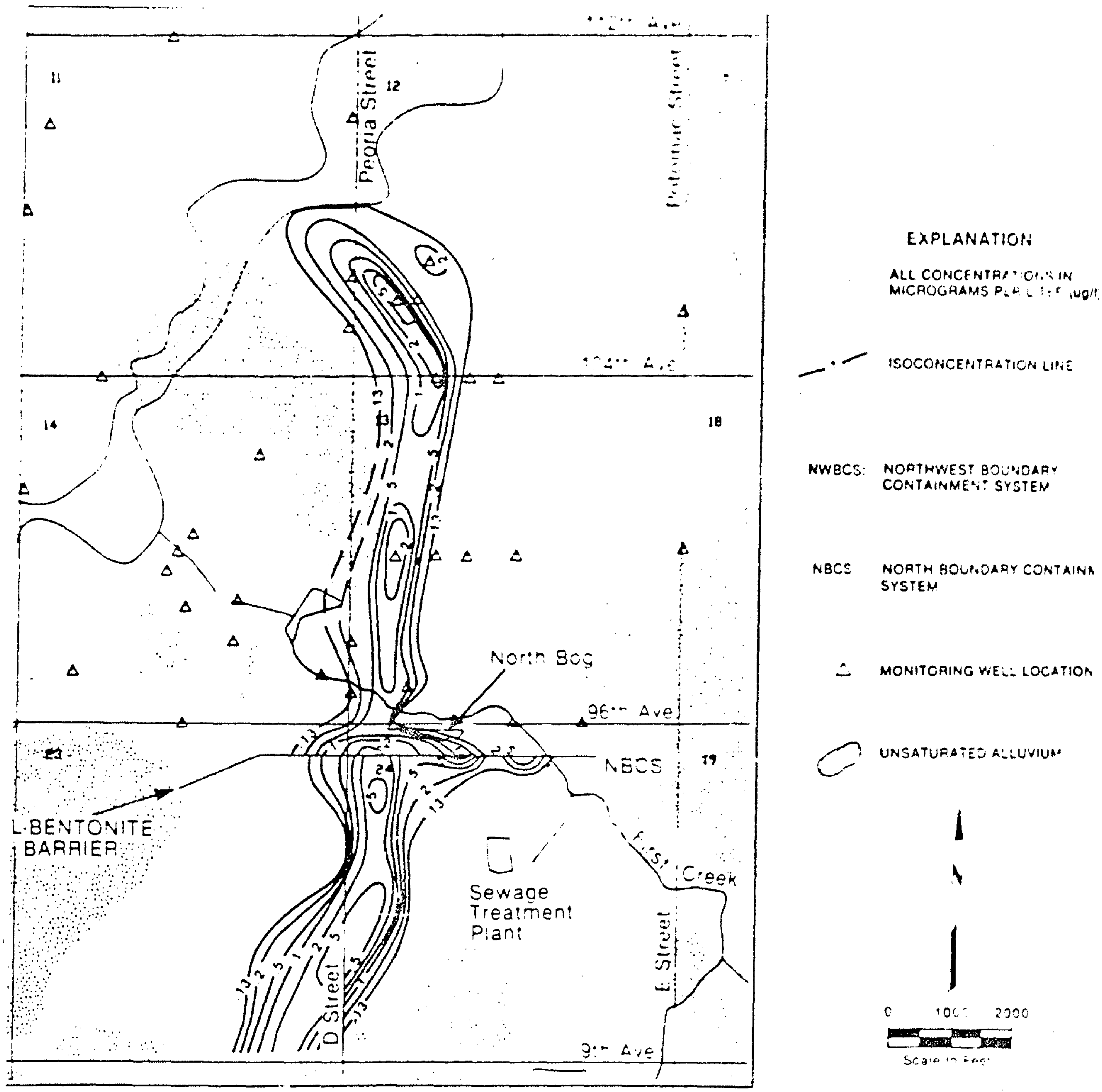


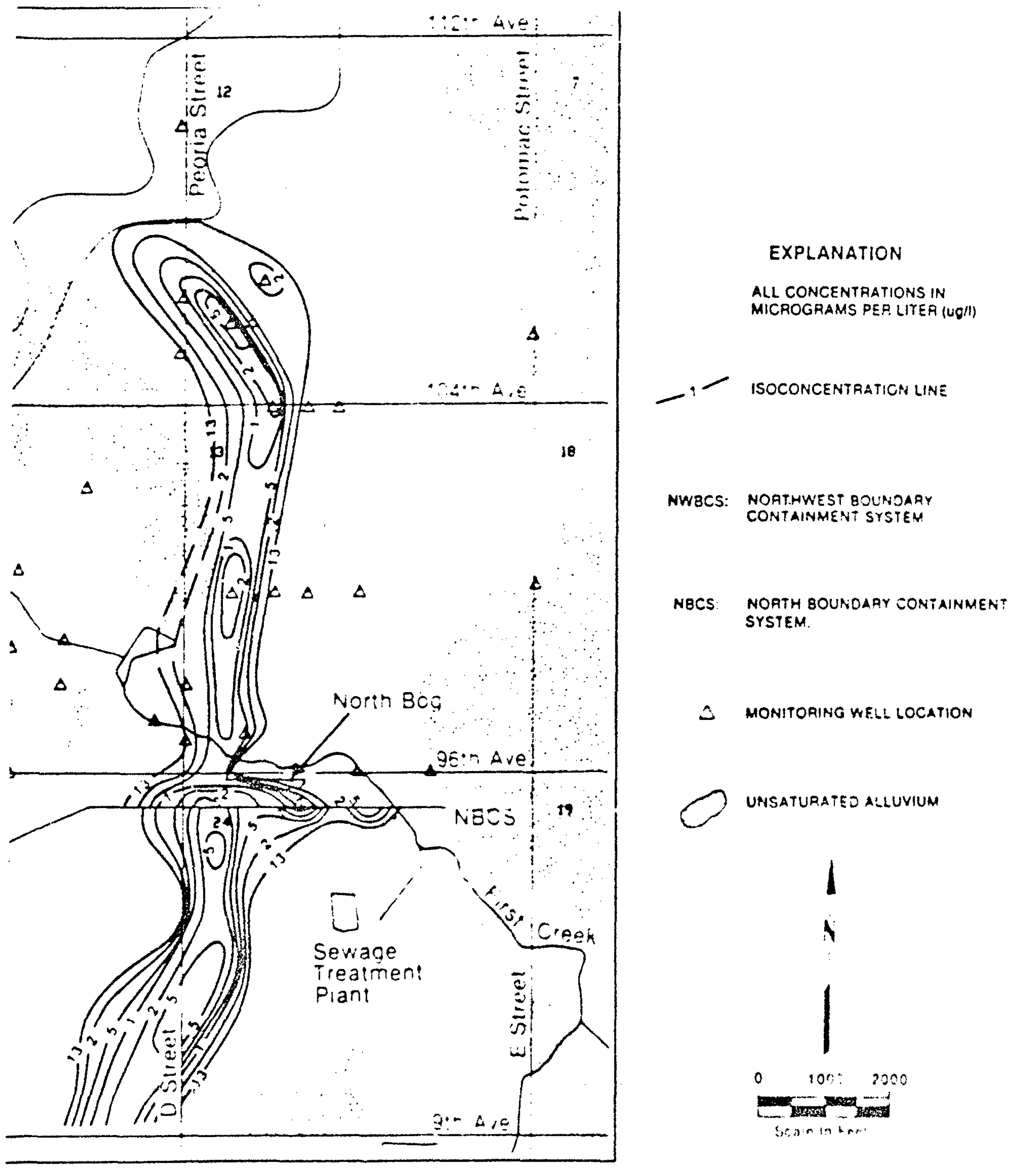
Figure F-4
DBCP CONCENTRATION DISTRIBUTION, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE,1988



Prepared for:
U.S. Army Program Manager's C
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

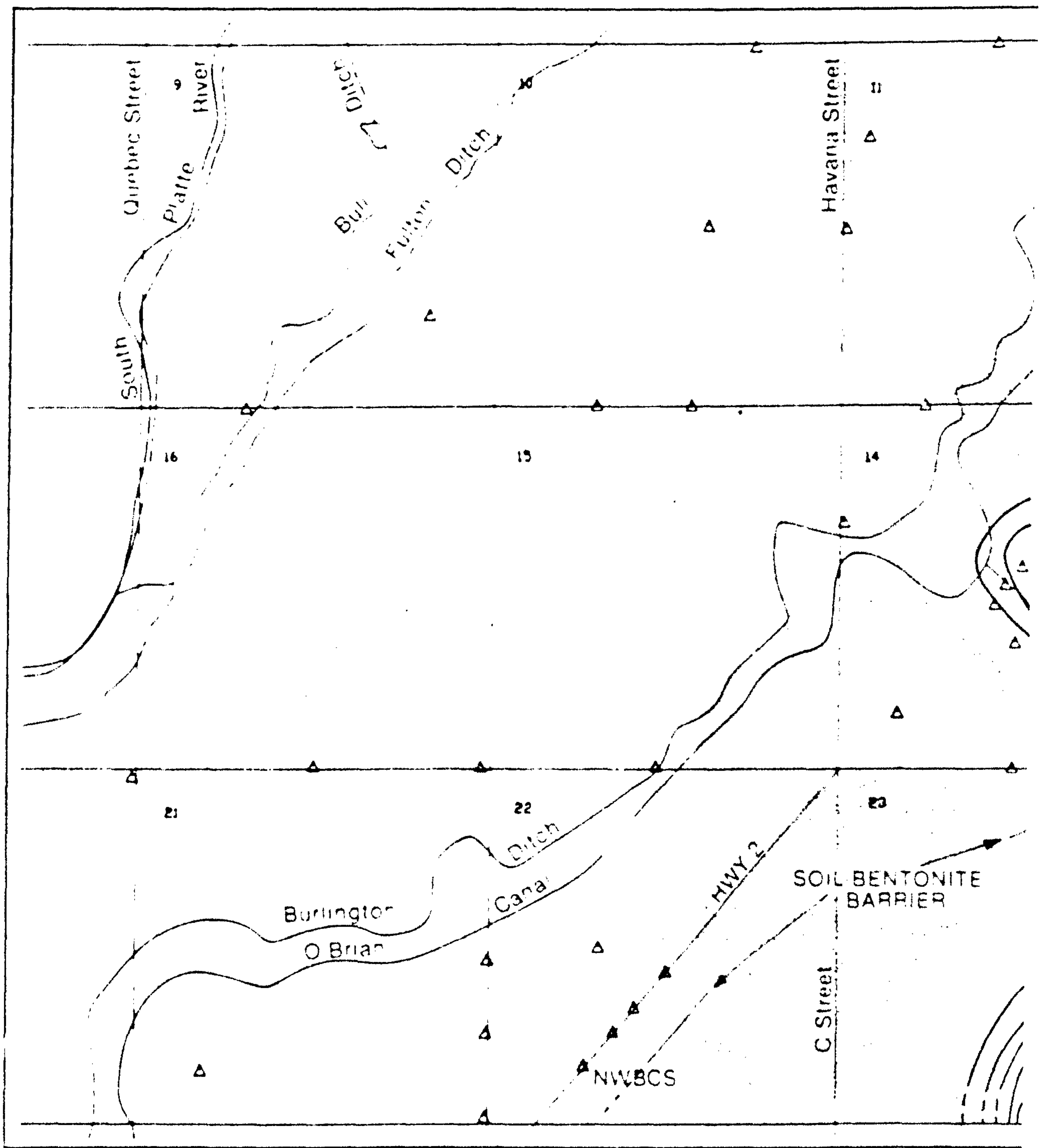
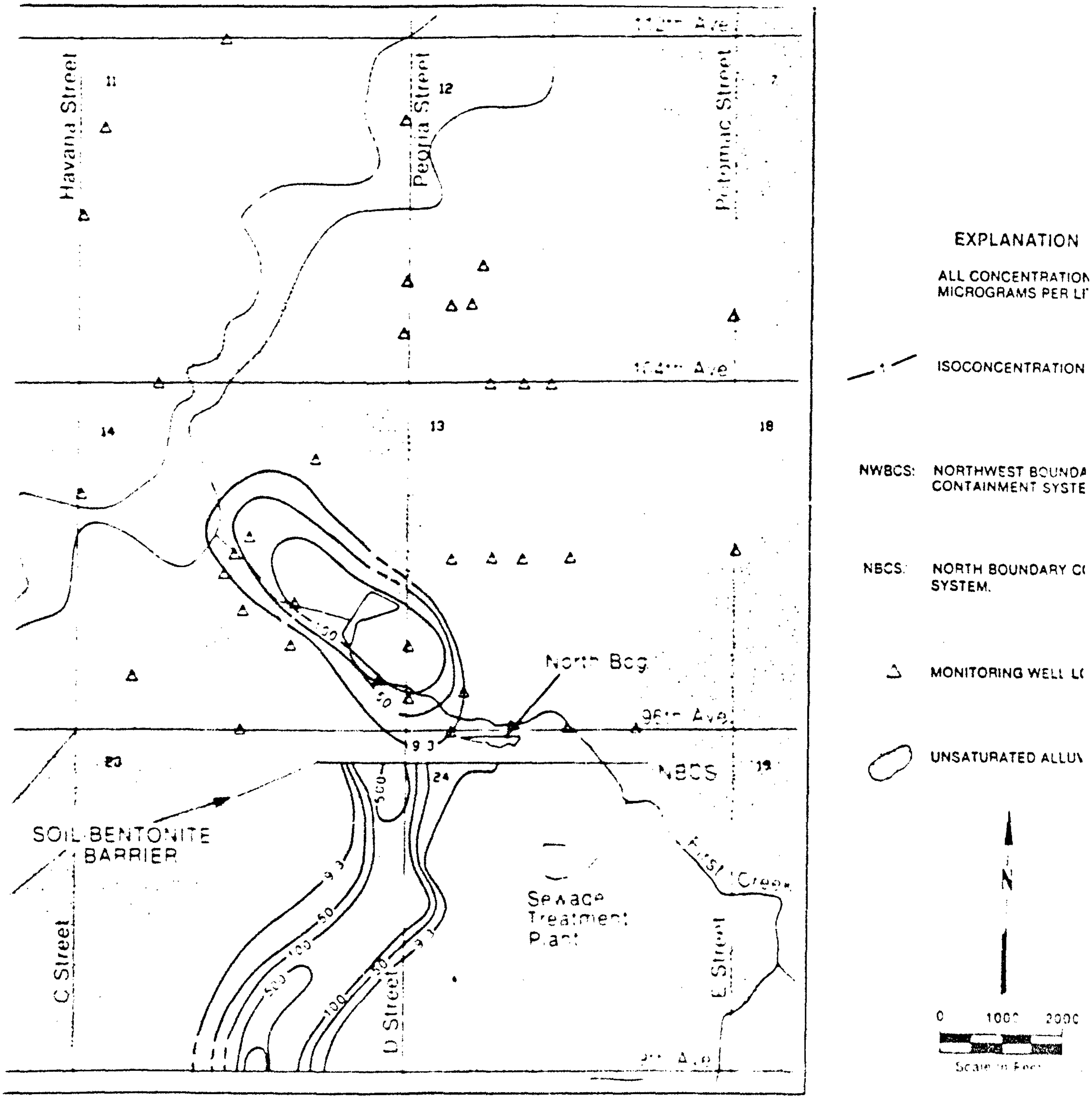
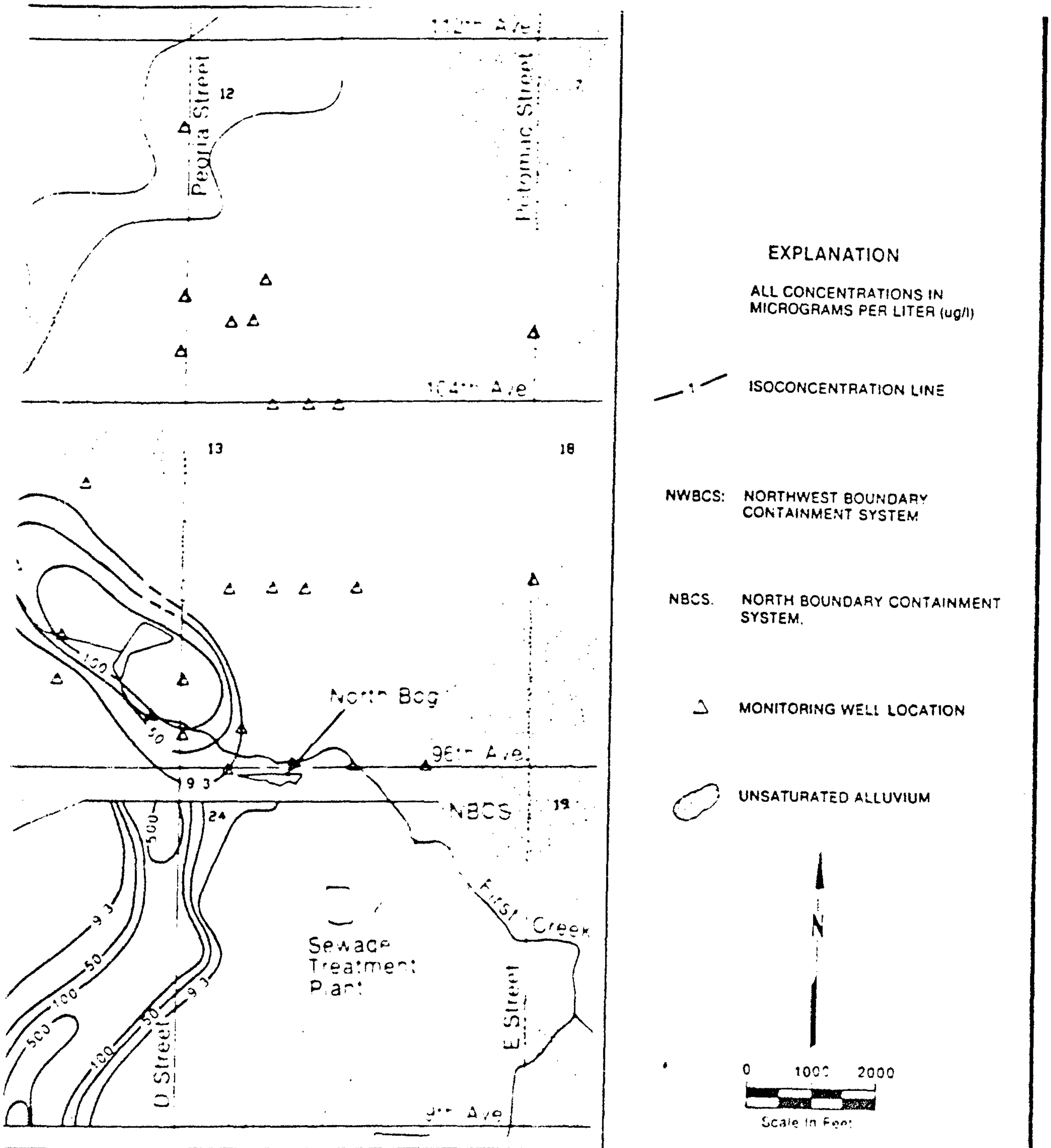


Figure F-5
DCPD CONCENTRATION DISTRIBUTION, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



Prepared for:
U.S. Army Program Manage
For Rocky Mountain Arsen
Aberdeen Proving Ground Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

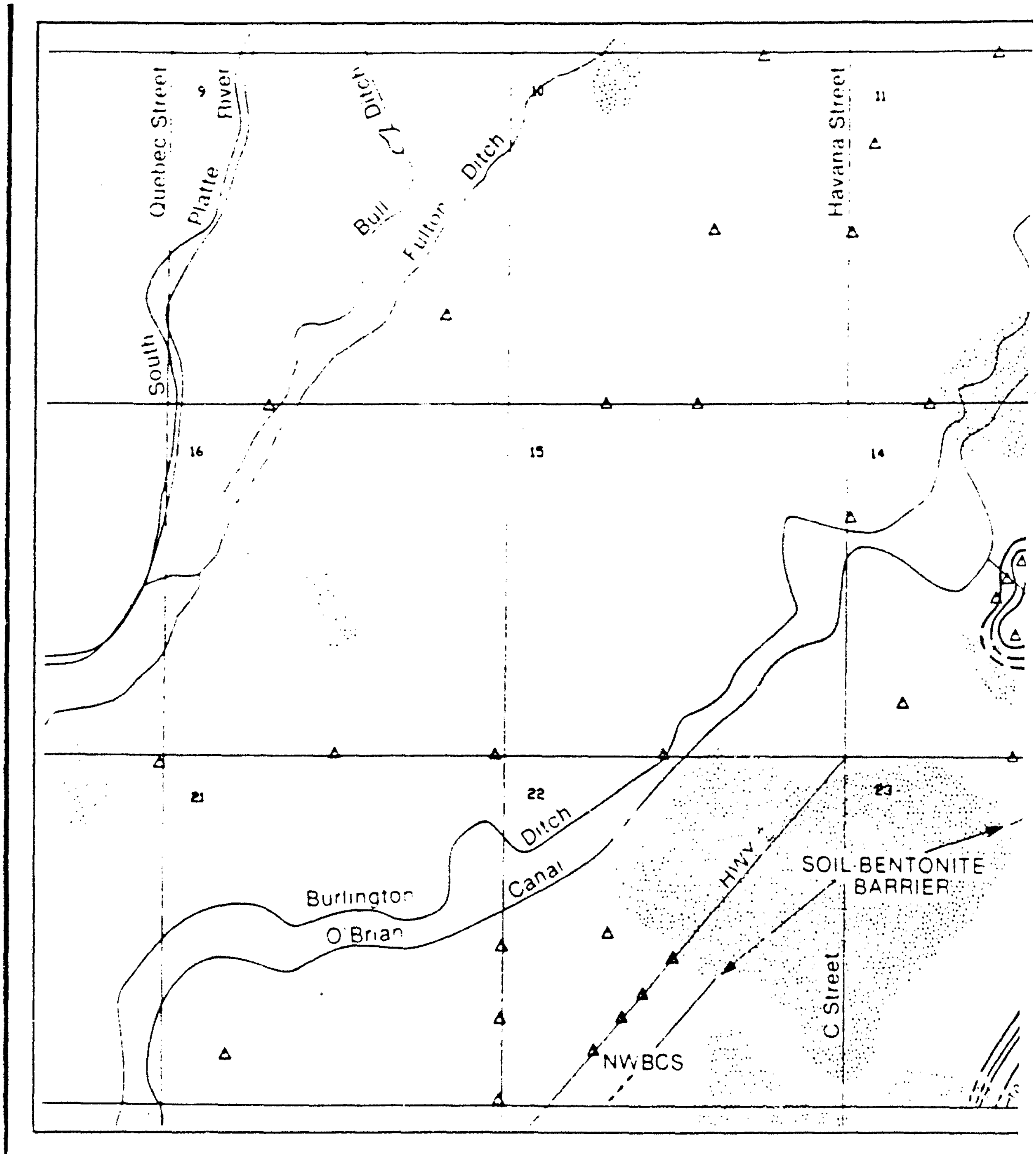
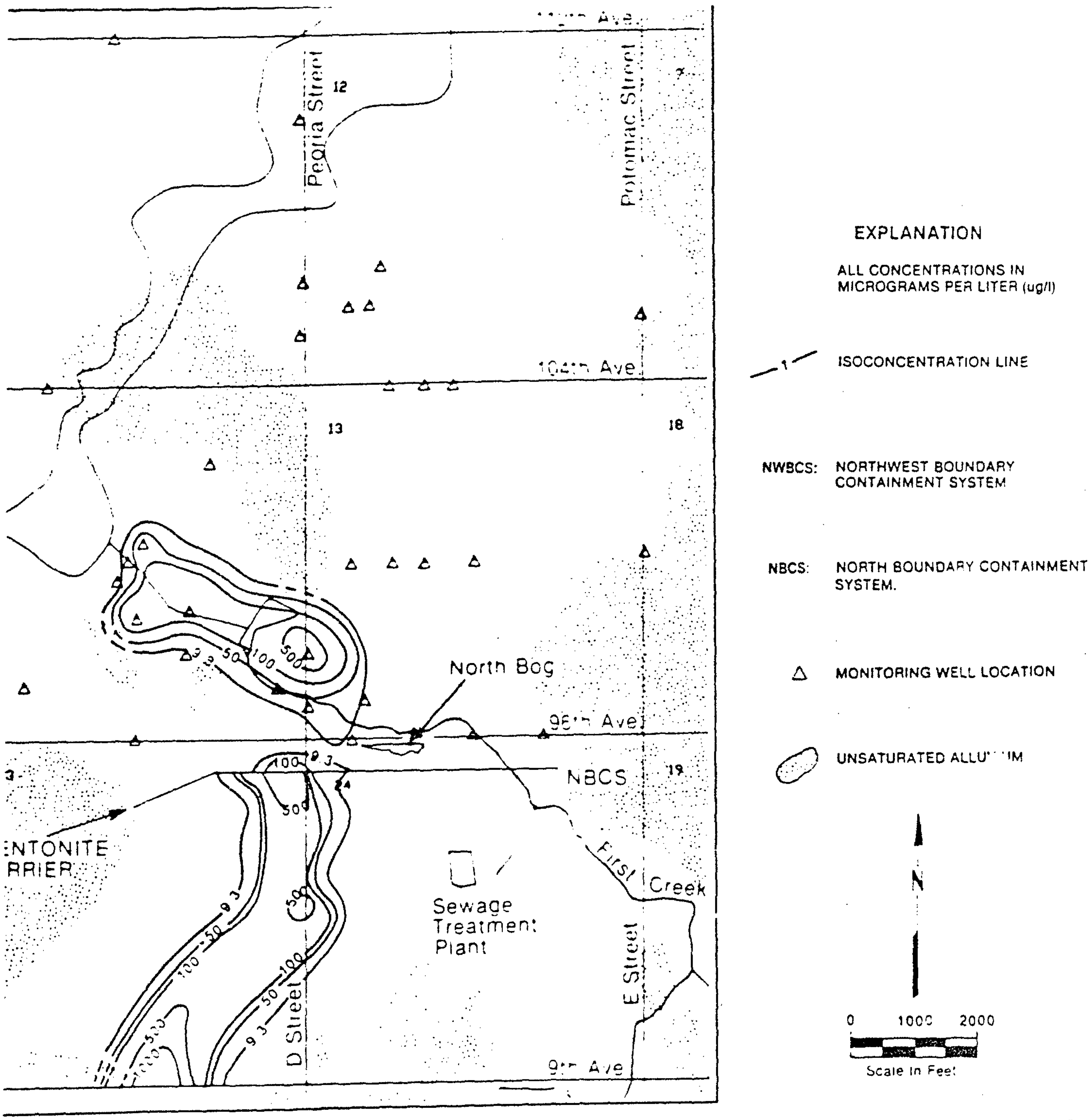
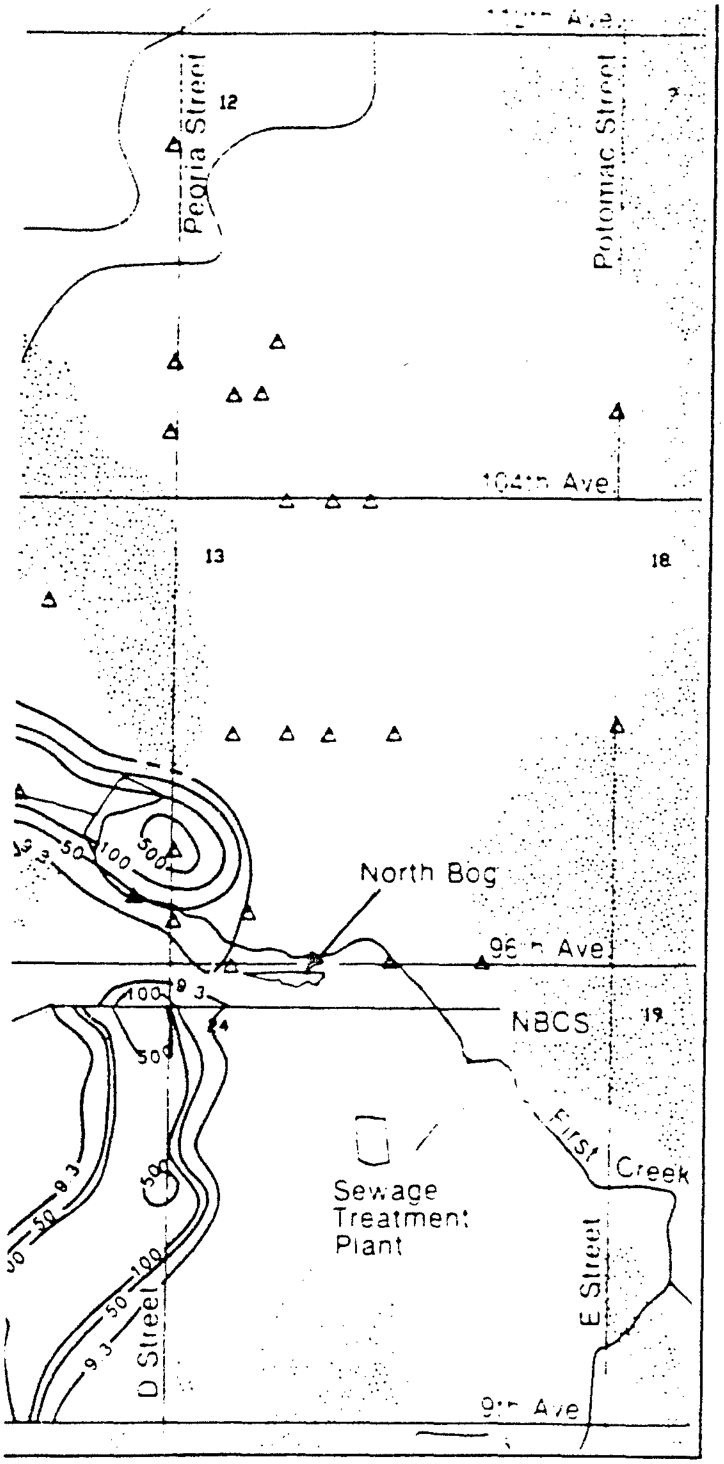


Figure F-6
DCDP CONCENTRATION DISTRIBUTION, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



Prepared for:
U.S. Army Program Manager's Offic
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



EXPLANATION

ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l)

ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

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0 1000 2000

Scale In Feet

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

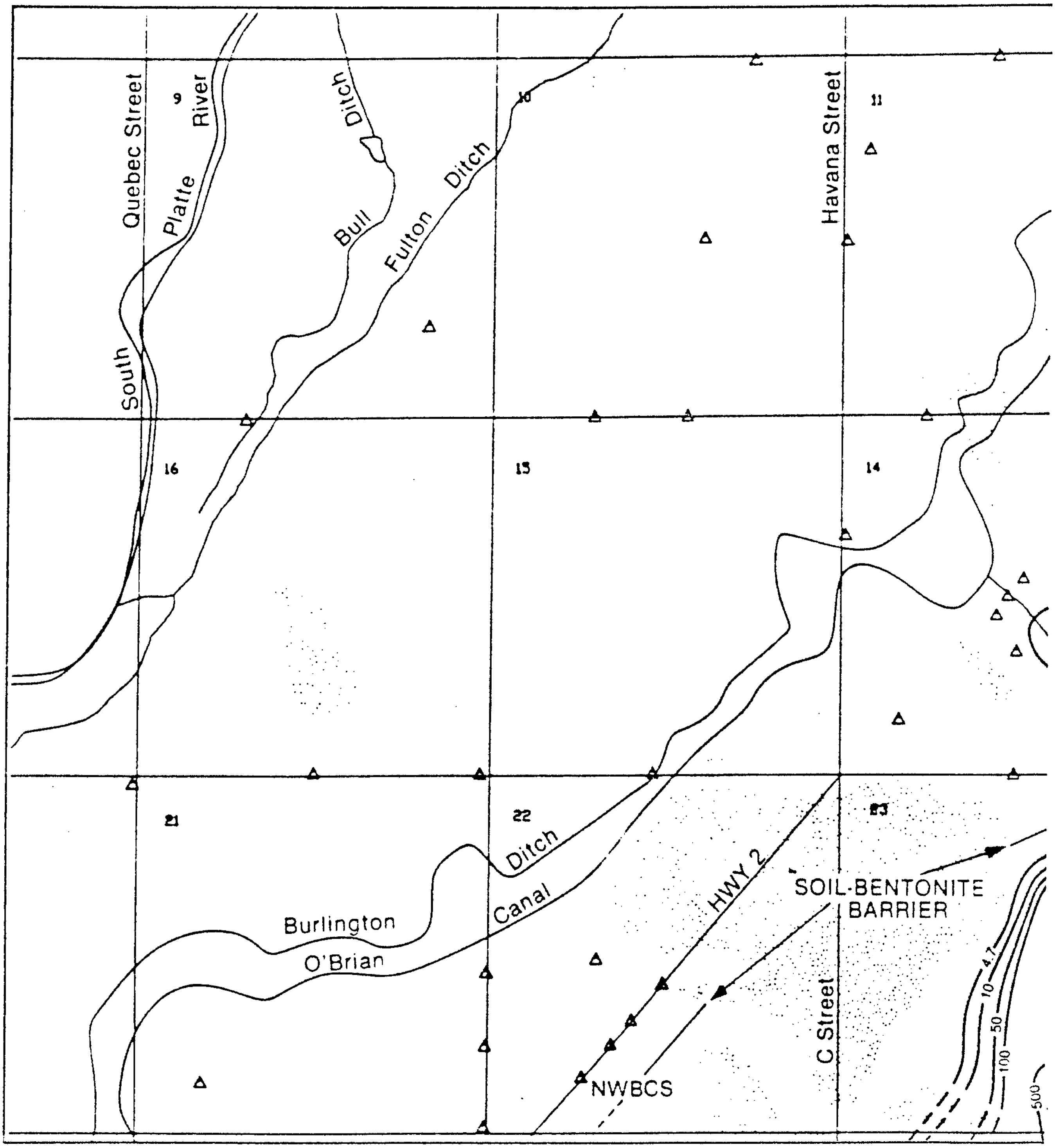
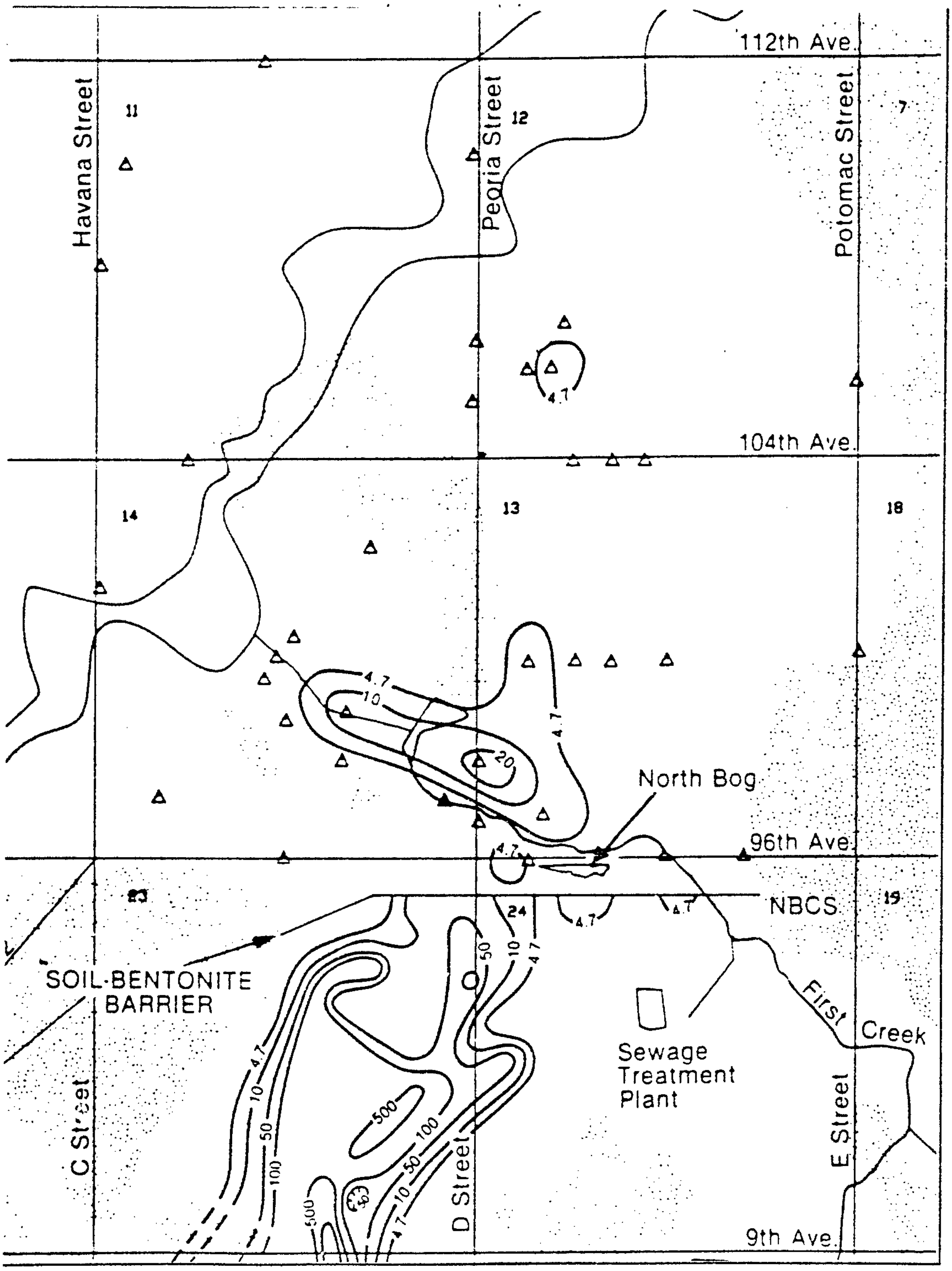
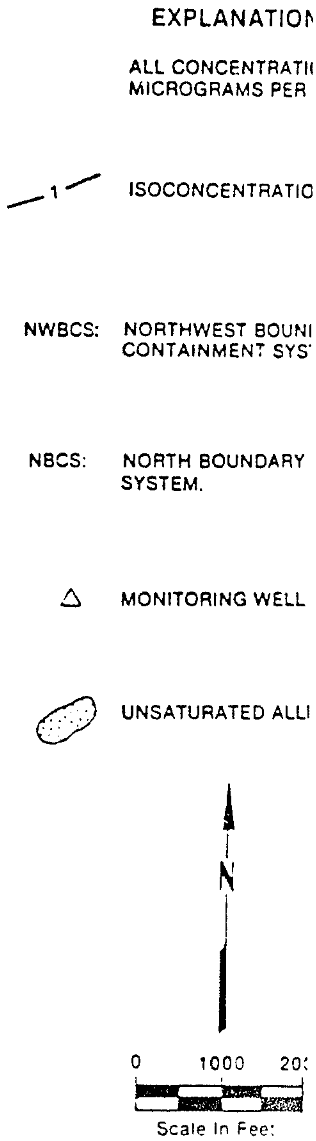


Figure F-7
CPMSO2 CONCENTRATION DISTRIBUTION,ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

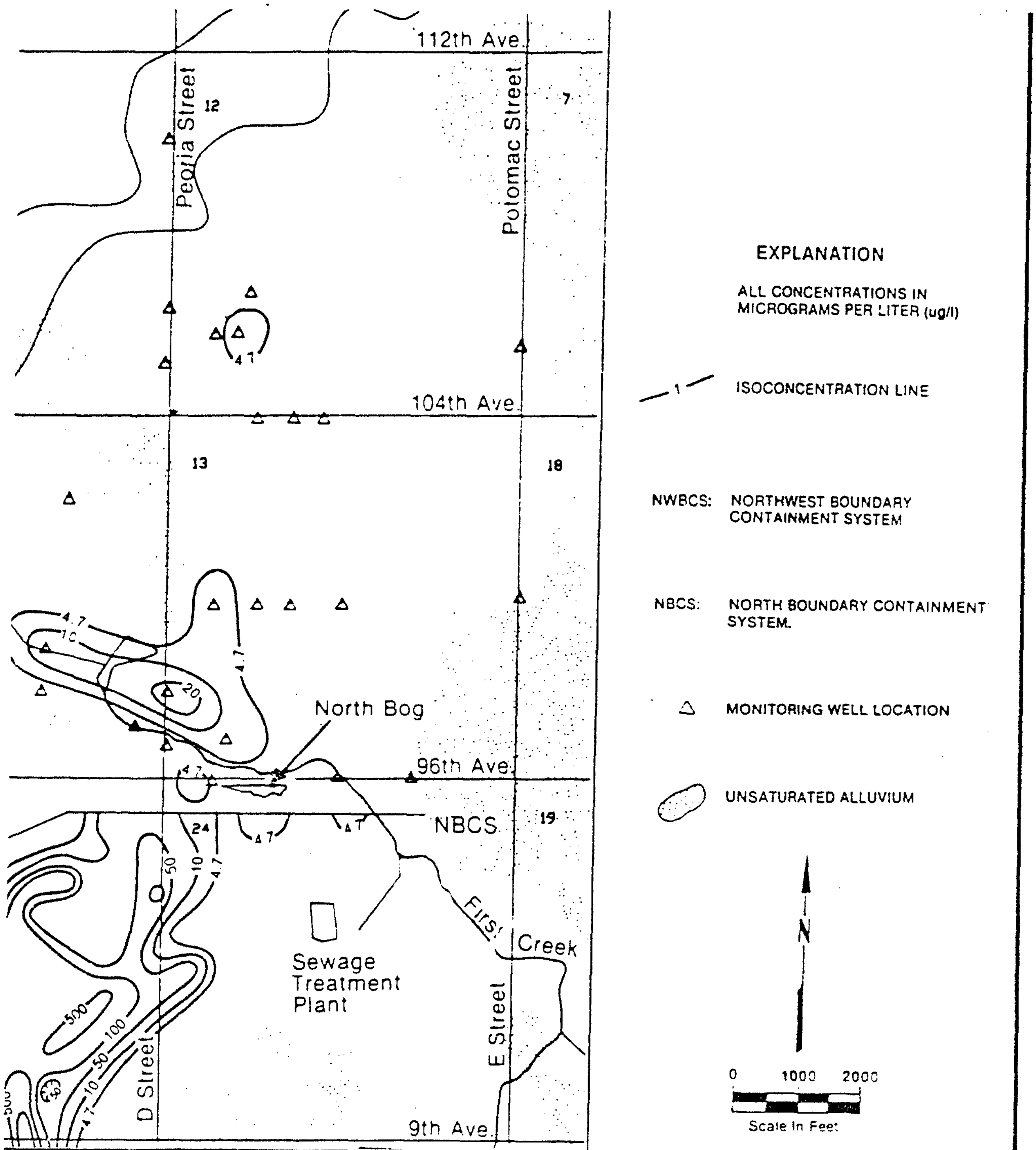
SOURCE:ESE 198?





Prepared for:
U.S. Army Program Manag
For Rocky Mountain Arse

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

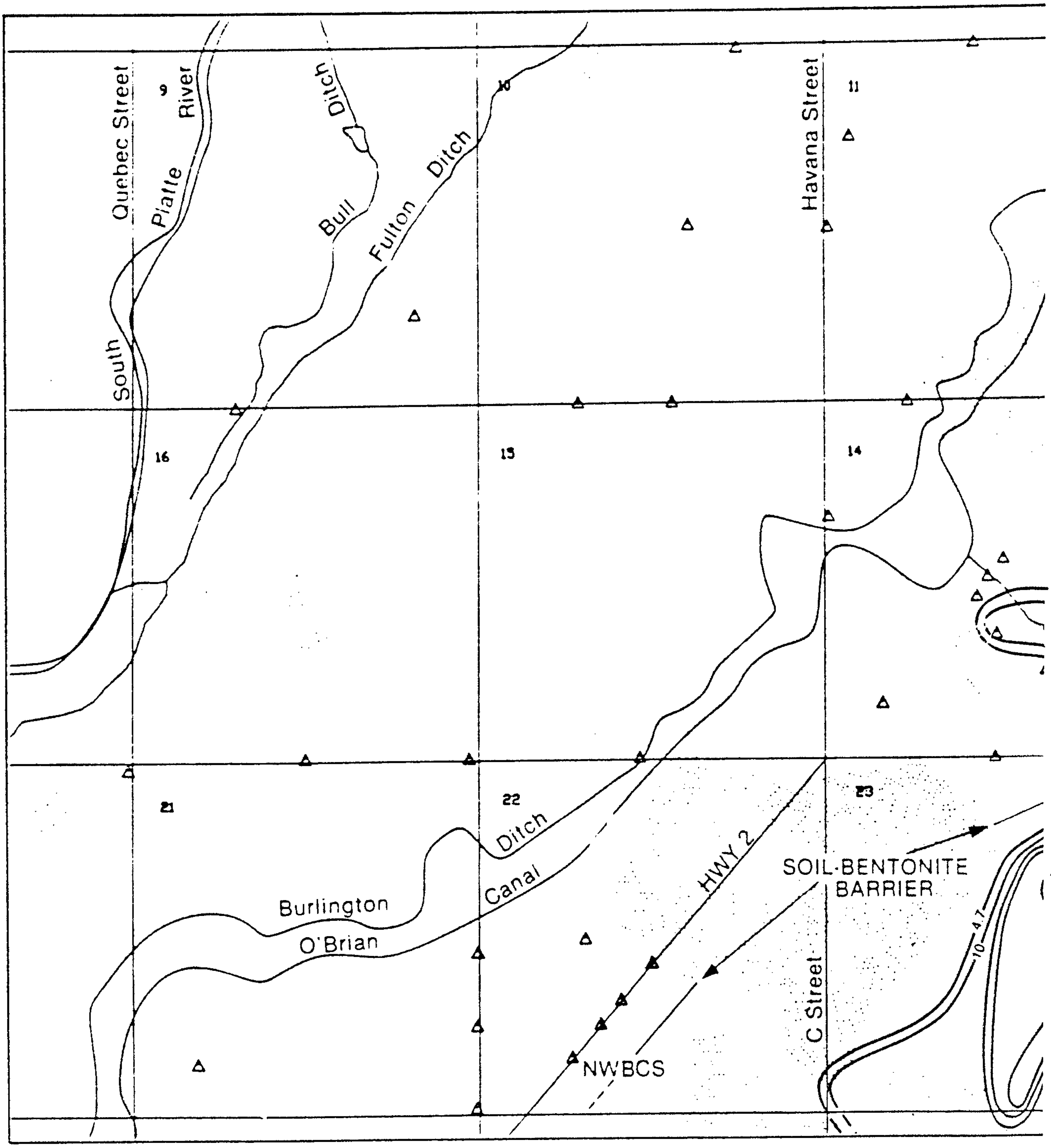
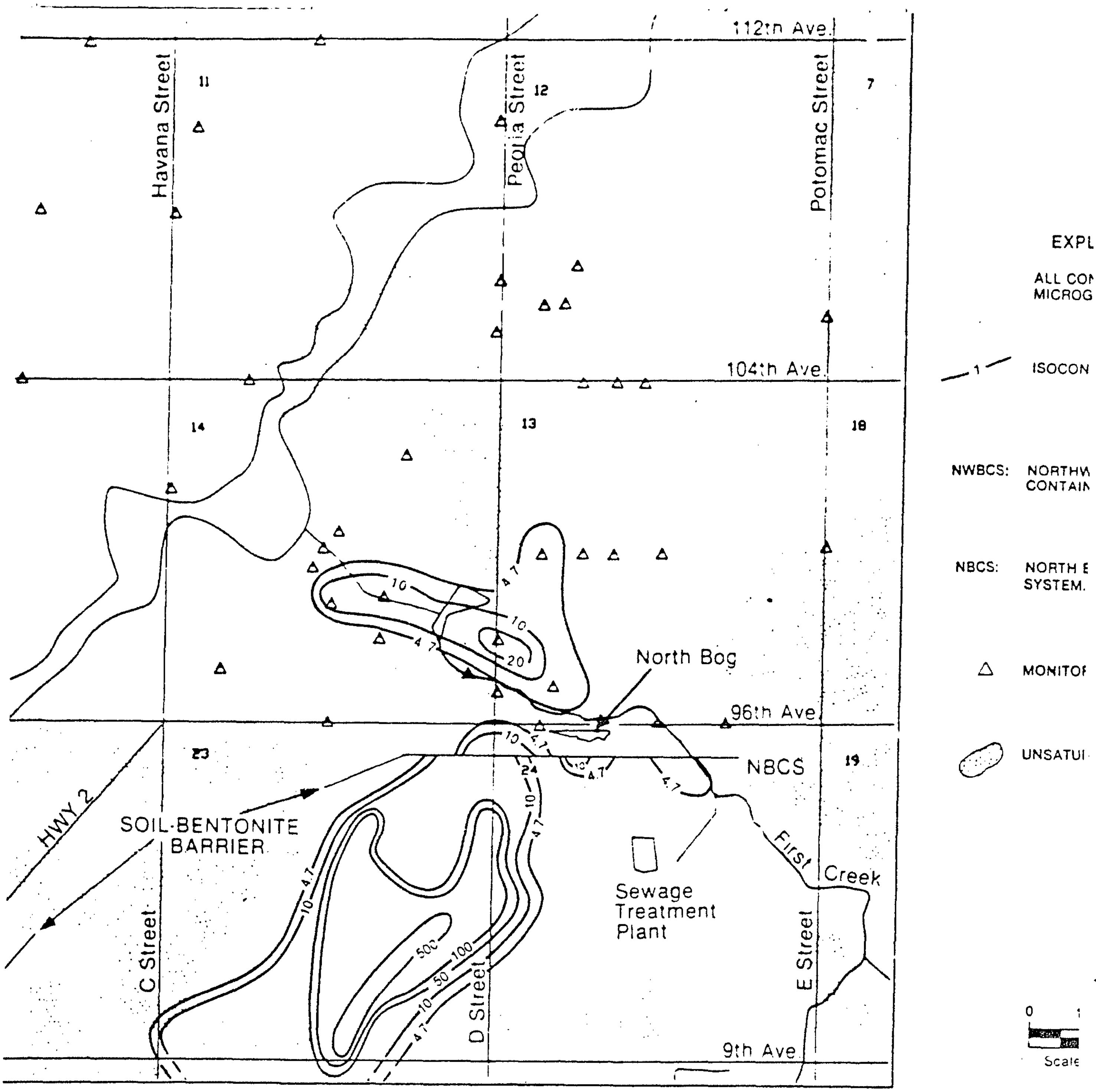


Figure F-8
CPMSO2 CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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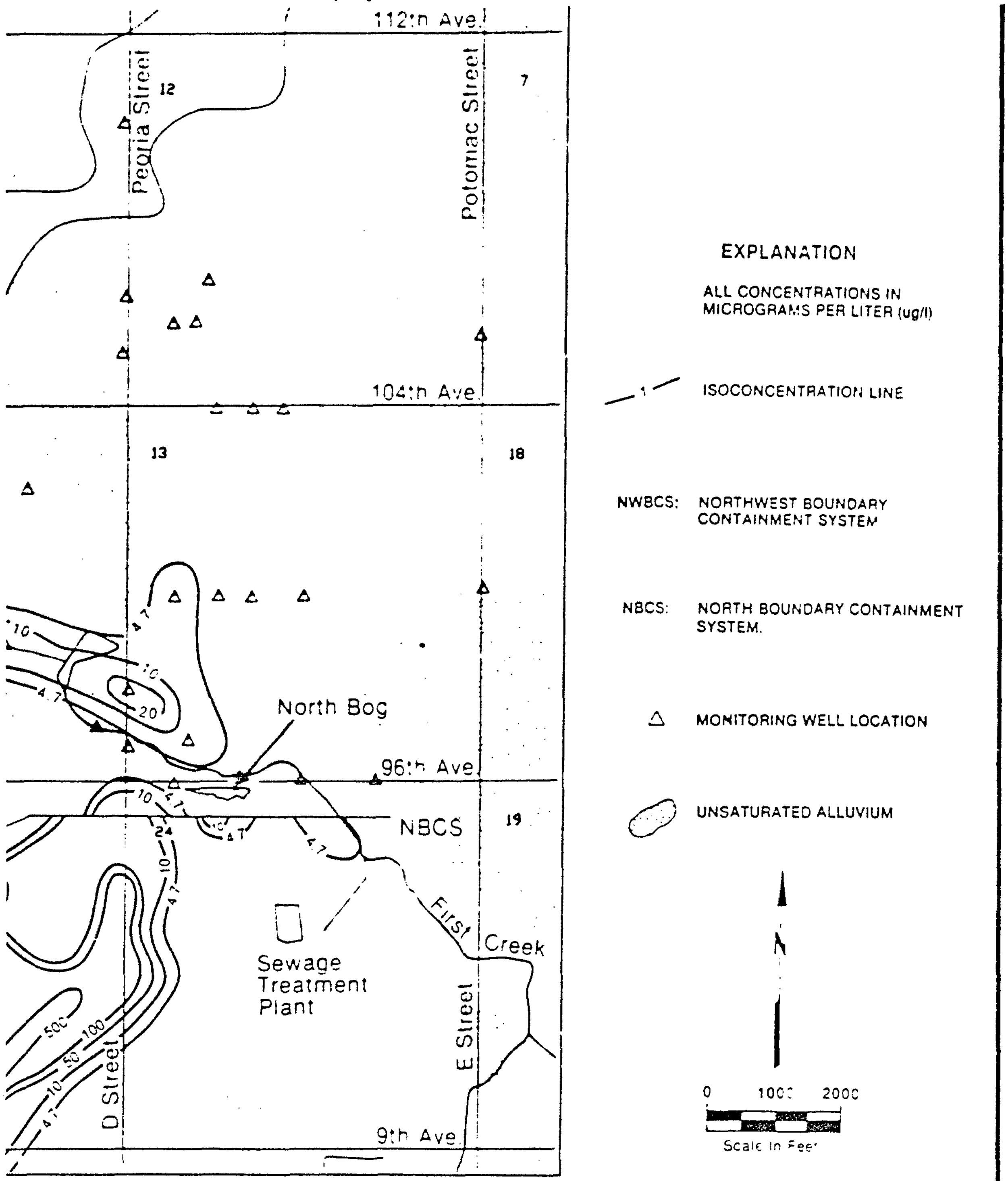
For Rocky Mountai

Aberdeen Proving Ground.



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

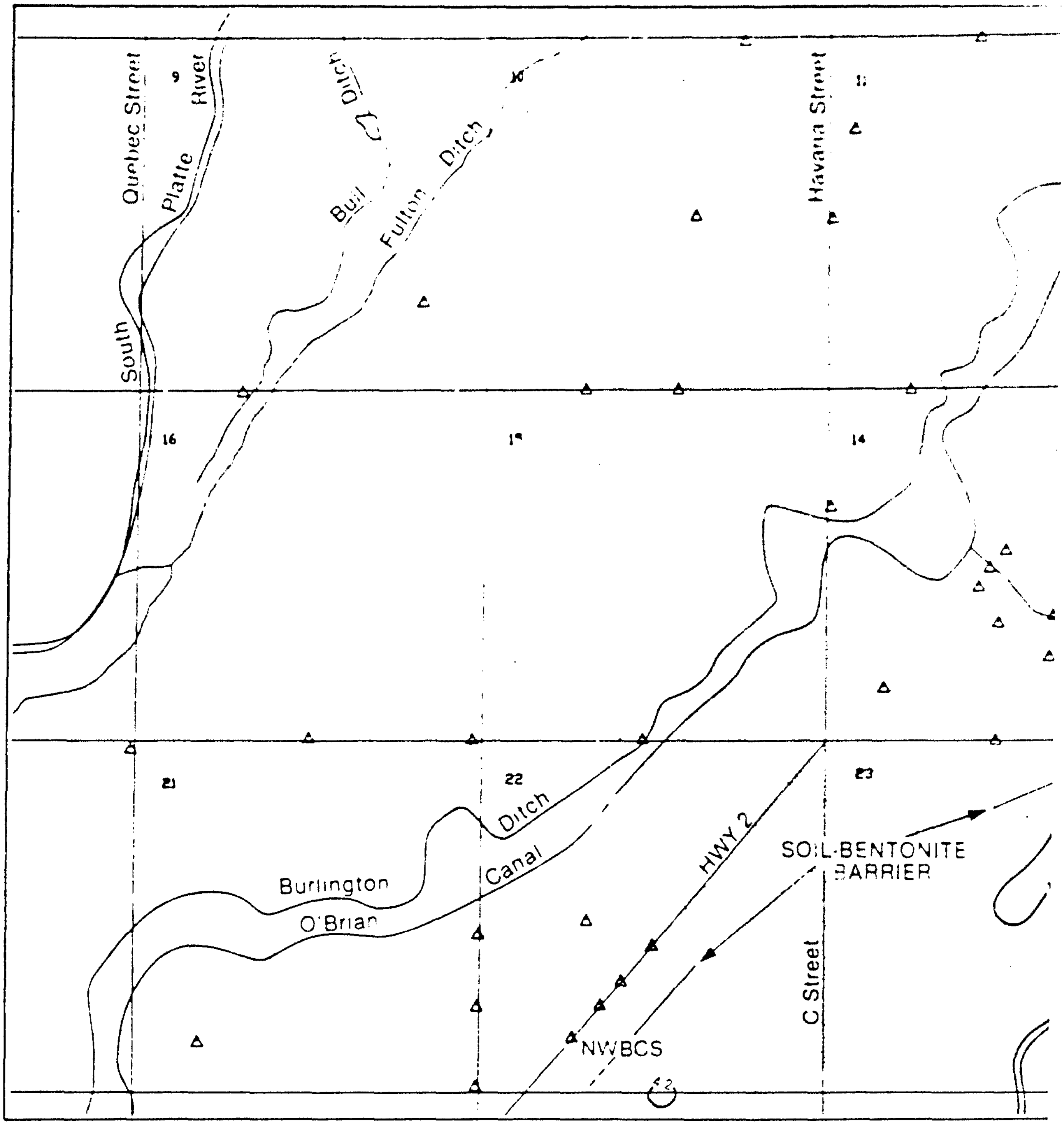
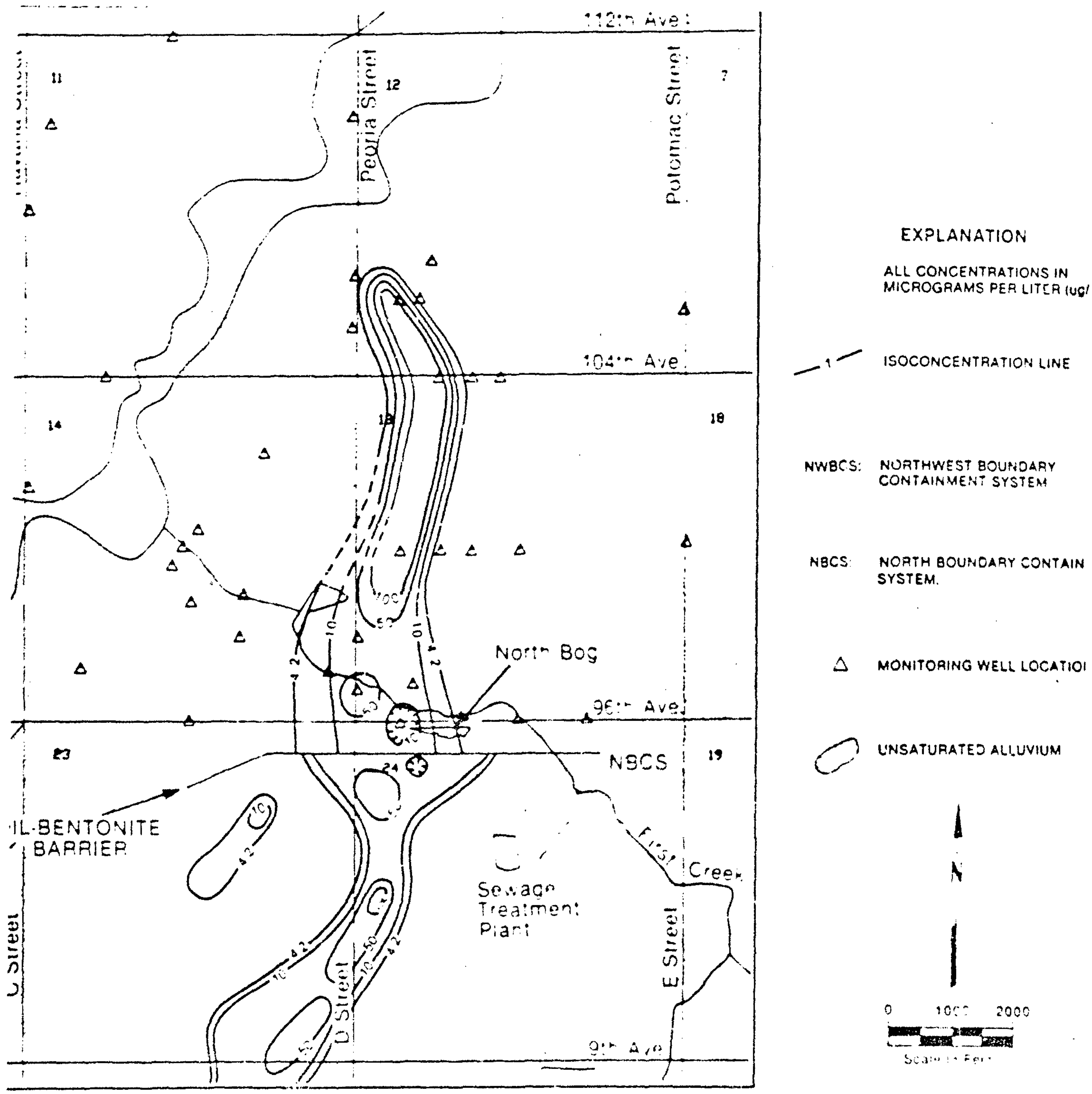


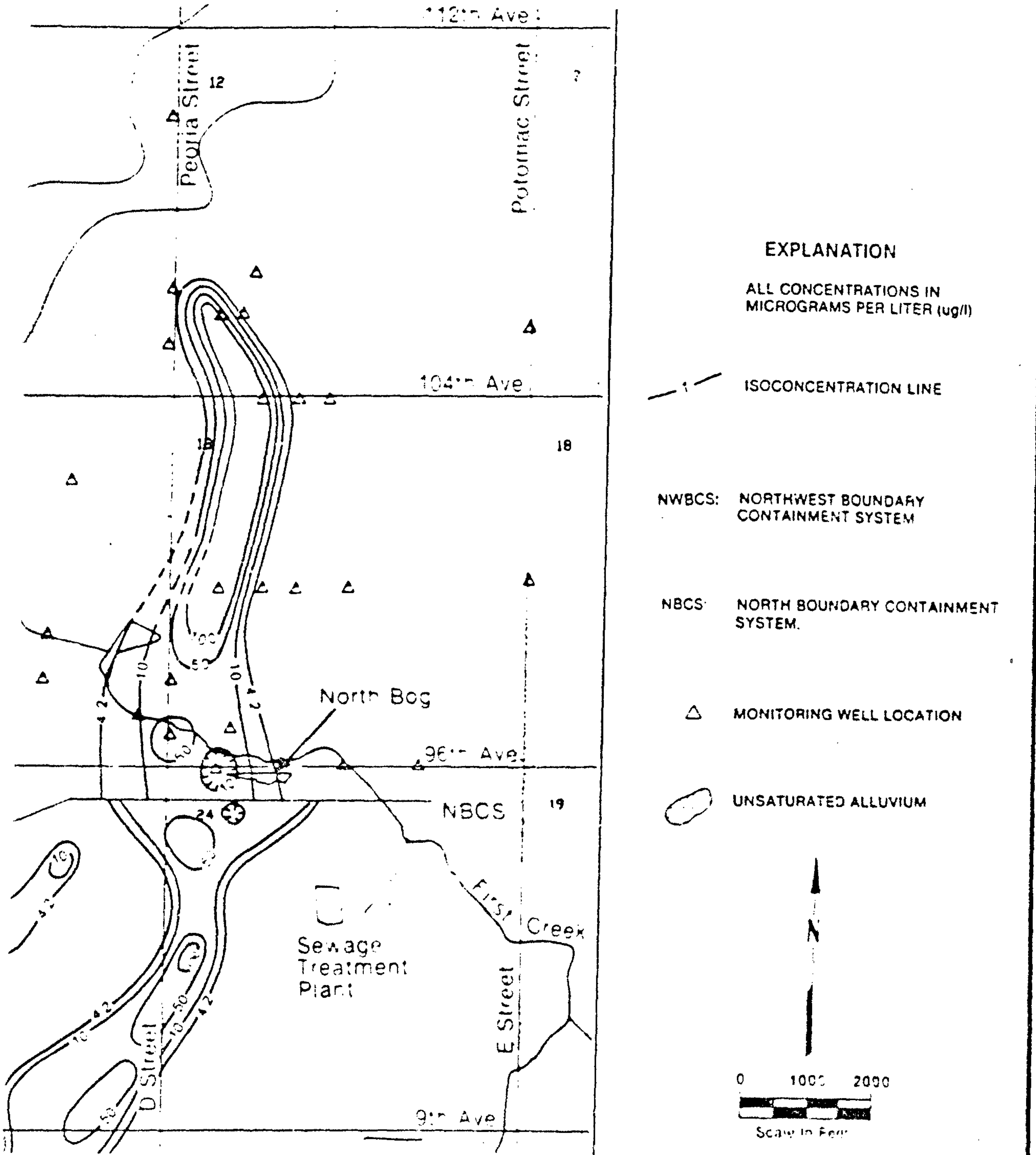
Figure F-9
CPMSO CONCENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE 1988



Prepared for:
U.S. Army Program Manager's (
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

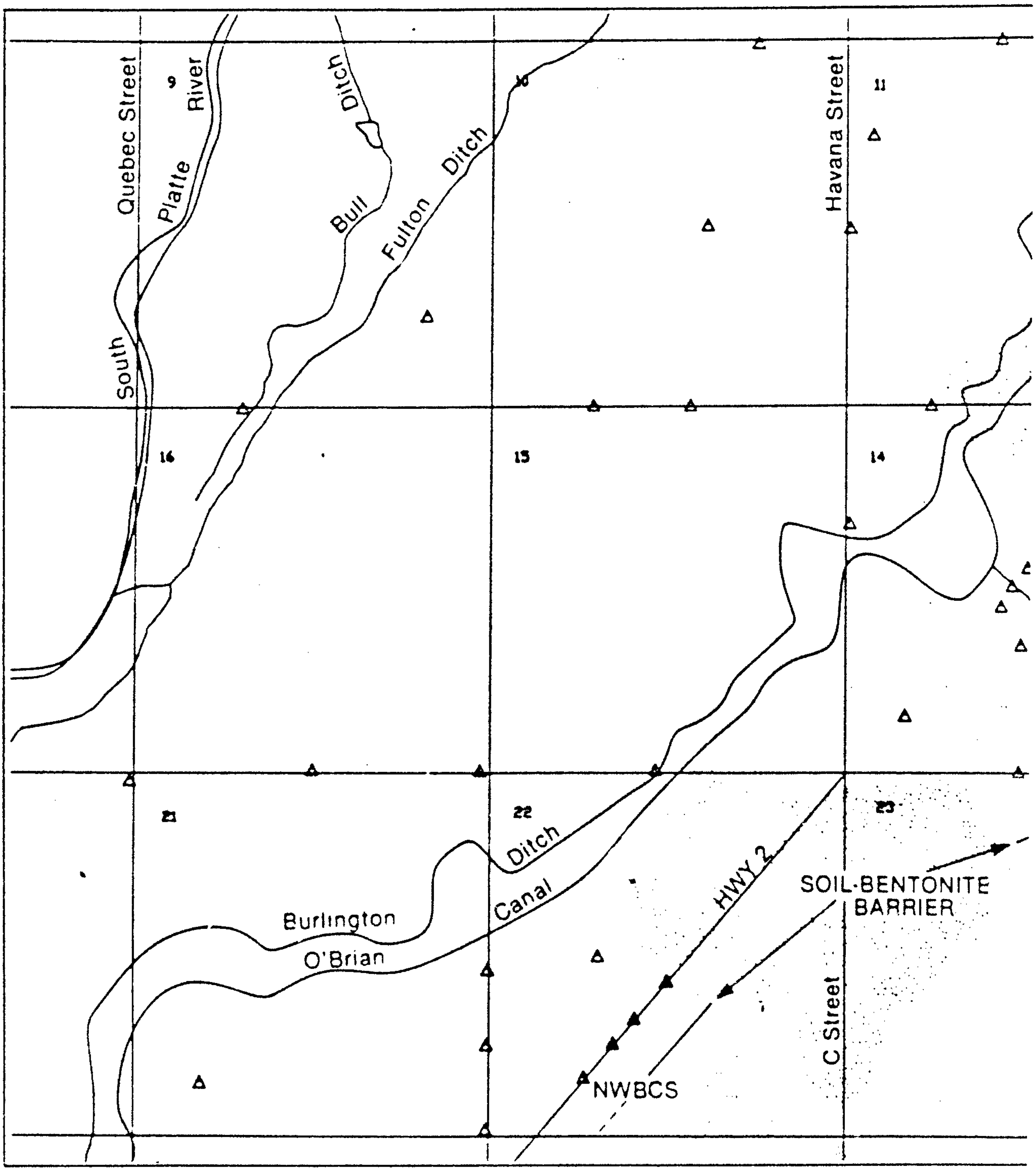
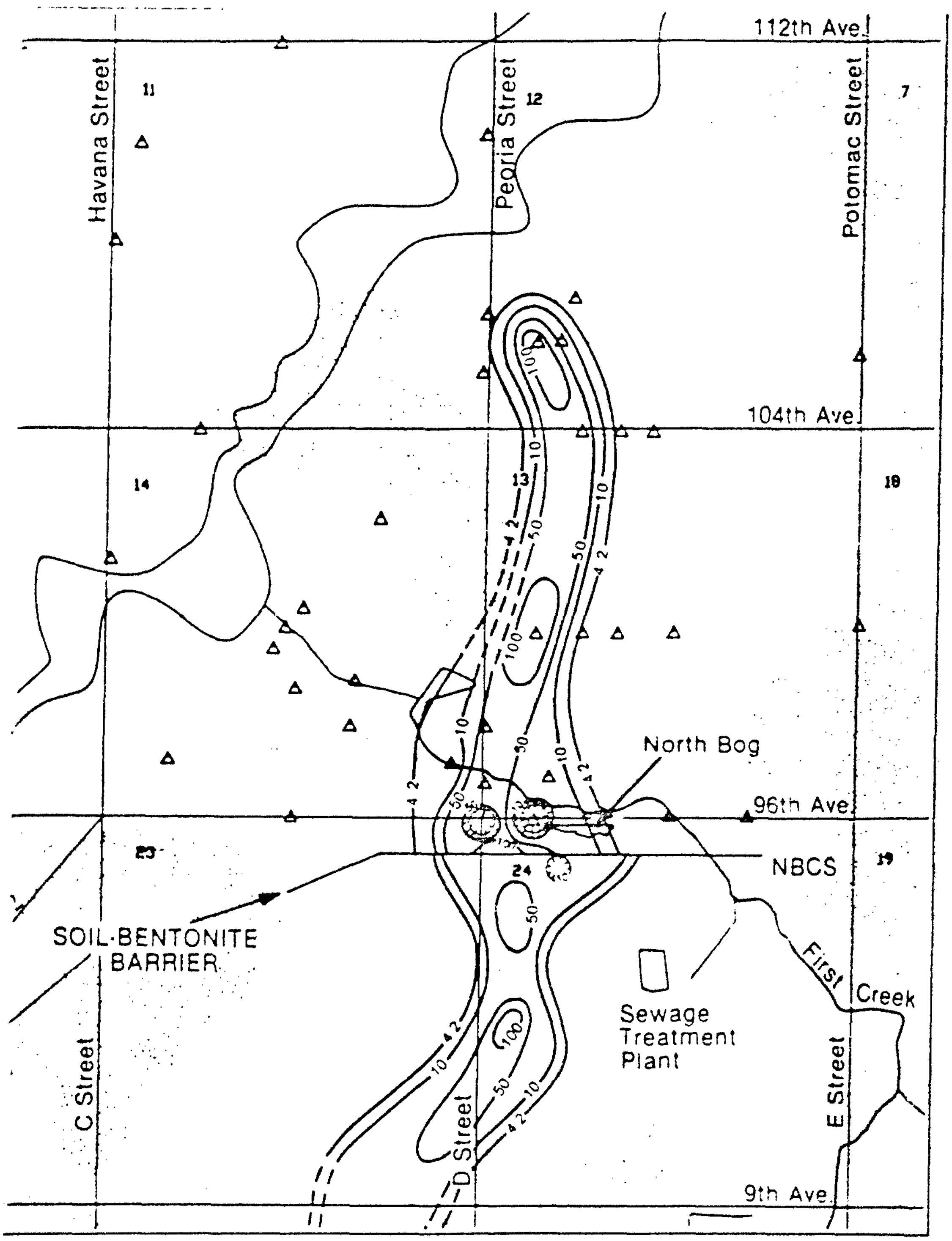


Figure F-10
CPMSO CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER



EXPLANATIOI

ALL CONCENTRATI
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NWBCS: NORTHWEST BOUN
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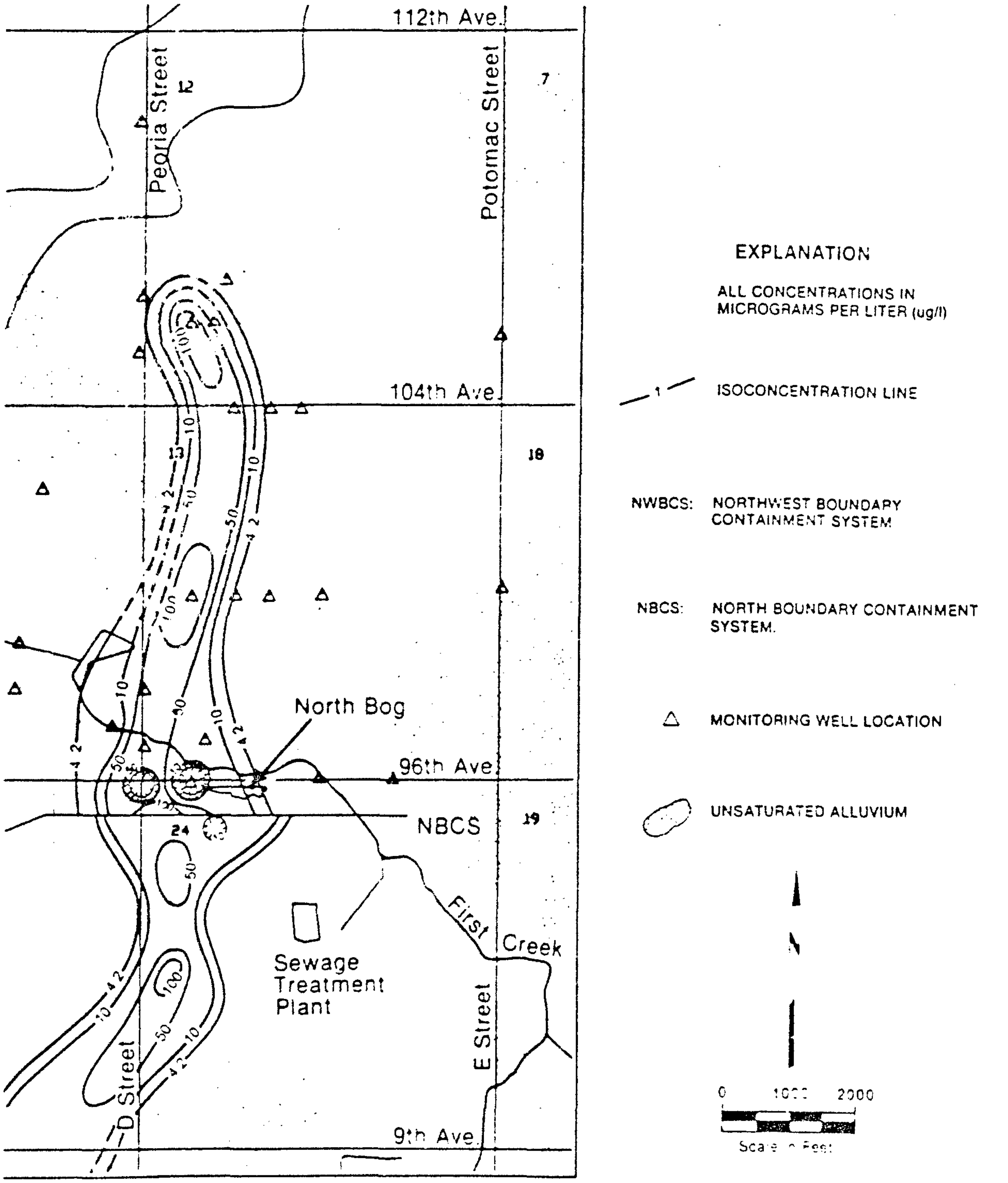


Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

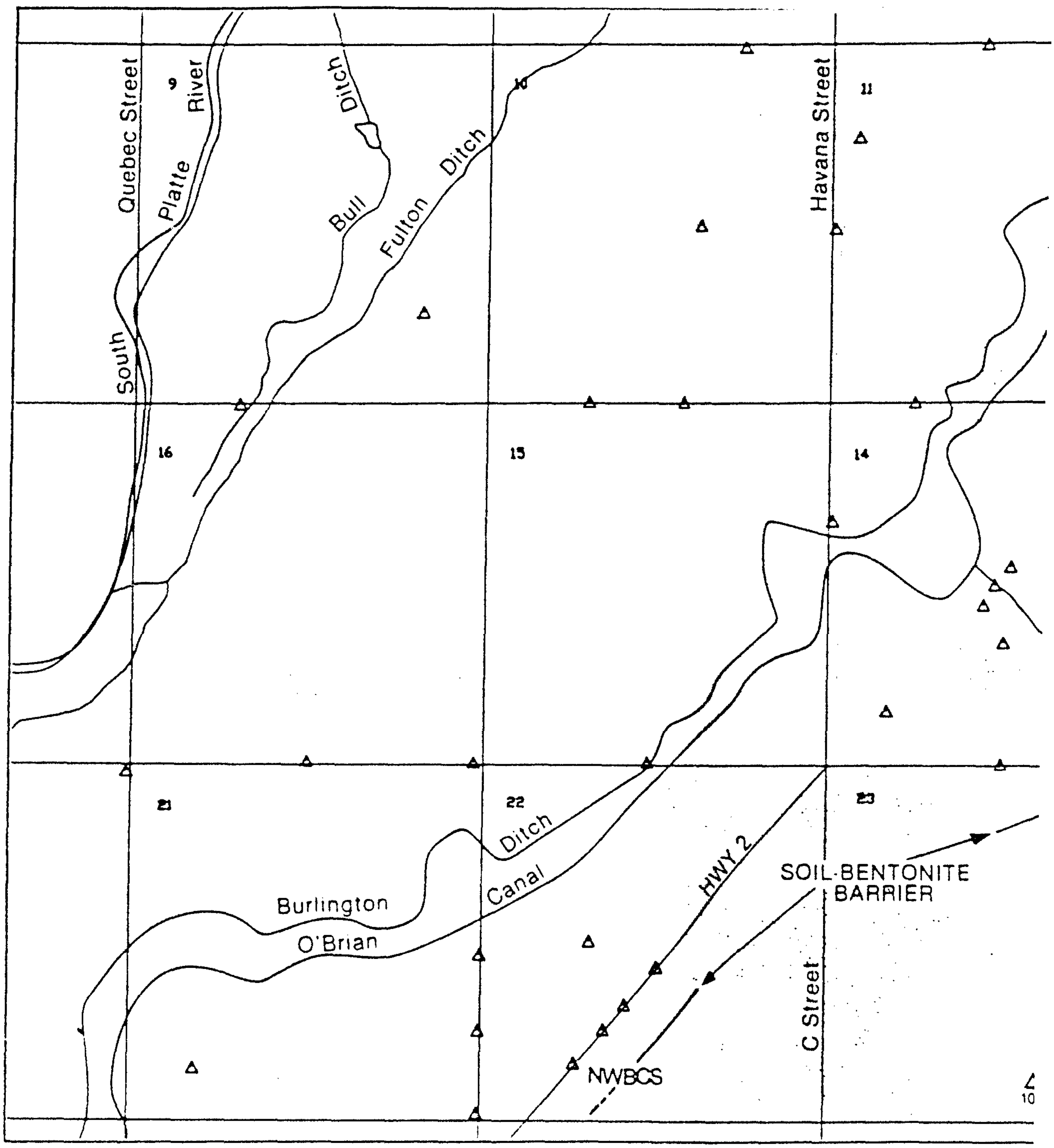
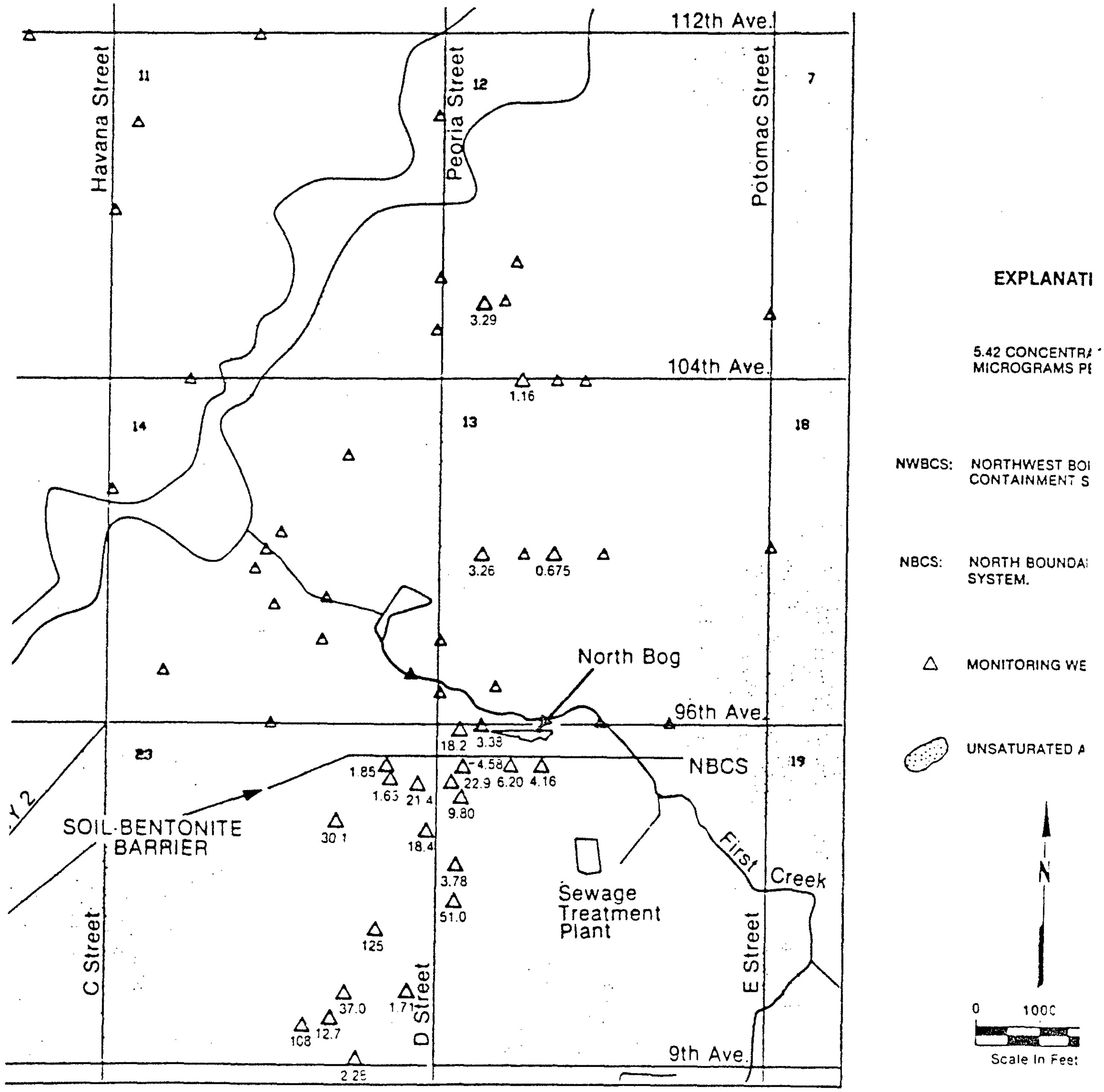


Figure F-11
CPMS CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE 1988



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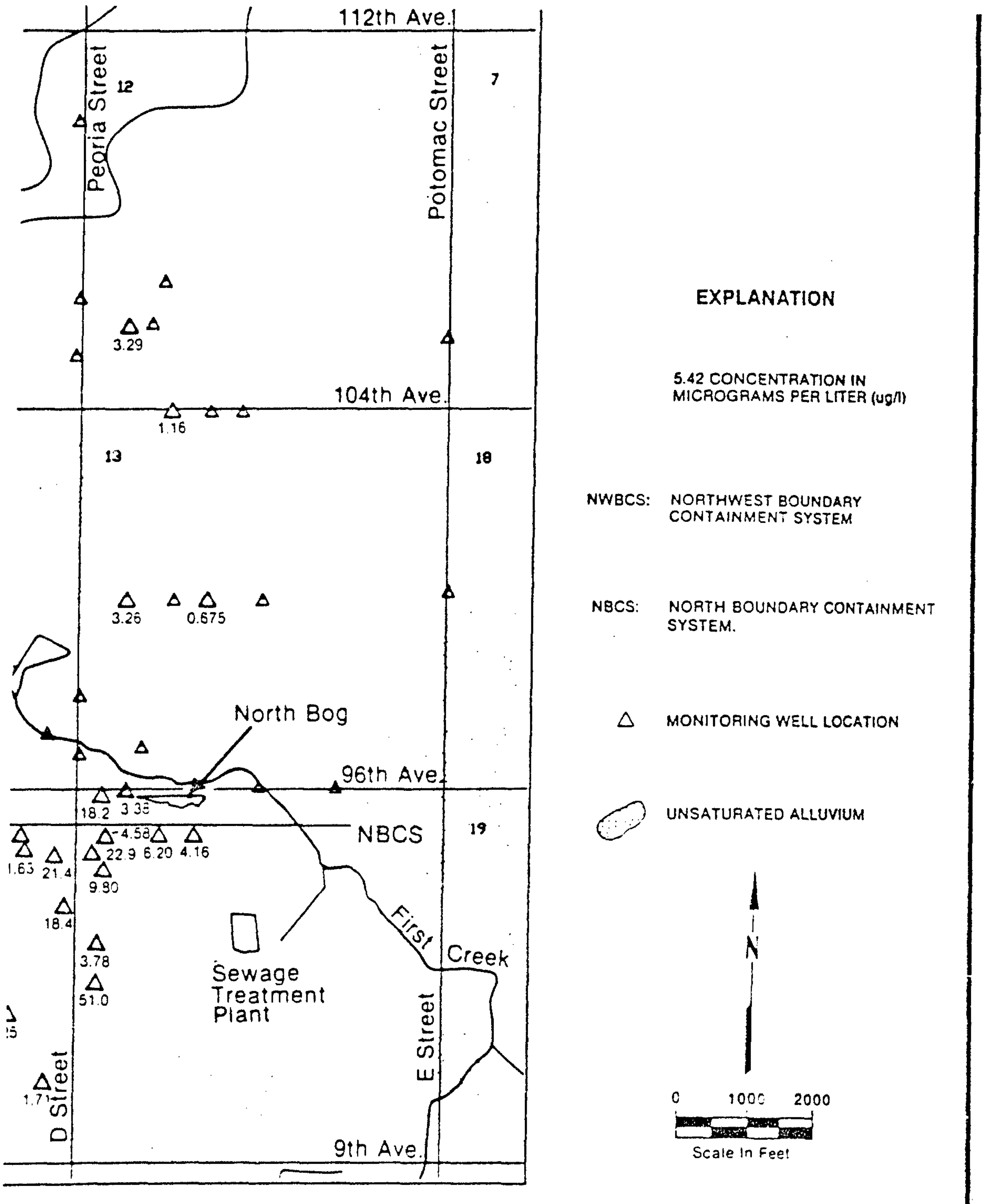
Prepared for:
U.S. Army Program Man
For Rocky Mountain Ars

Aberdeen Proving Ground, Maryla



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

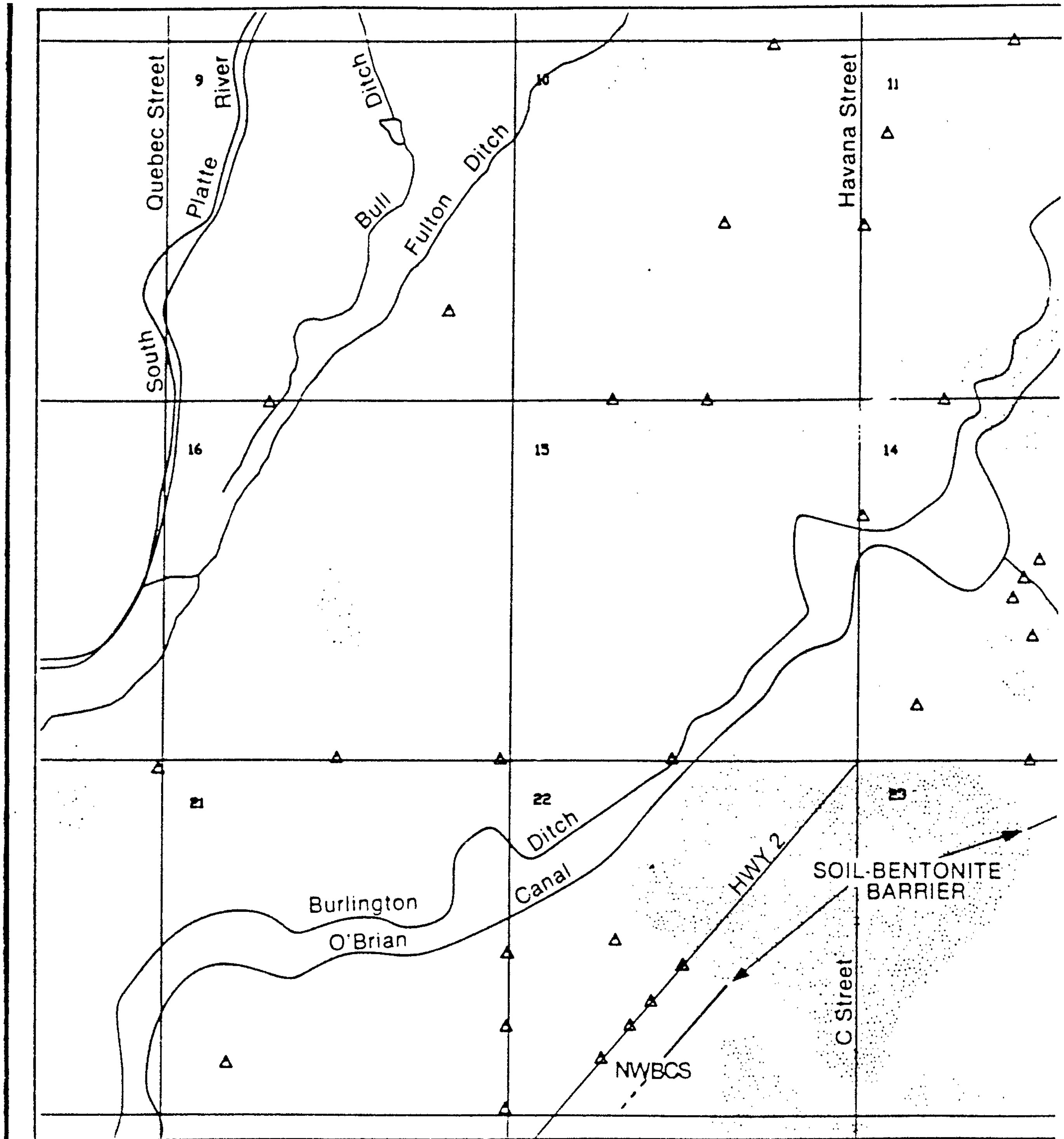
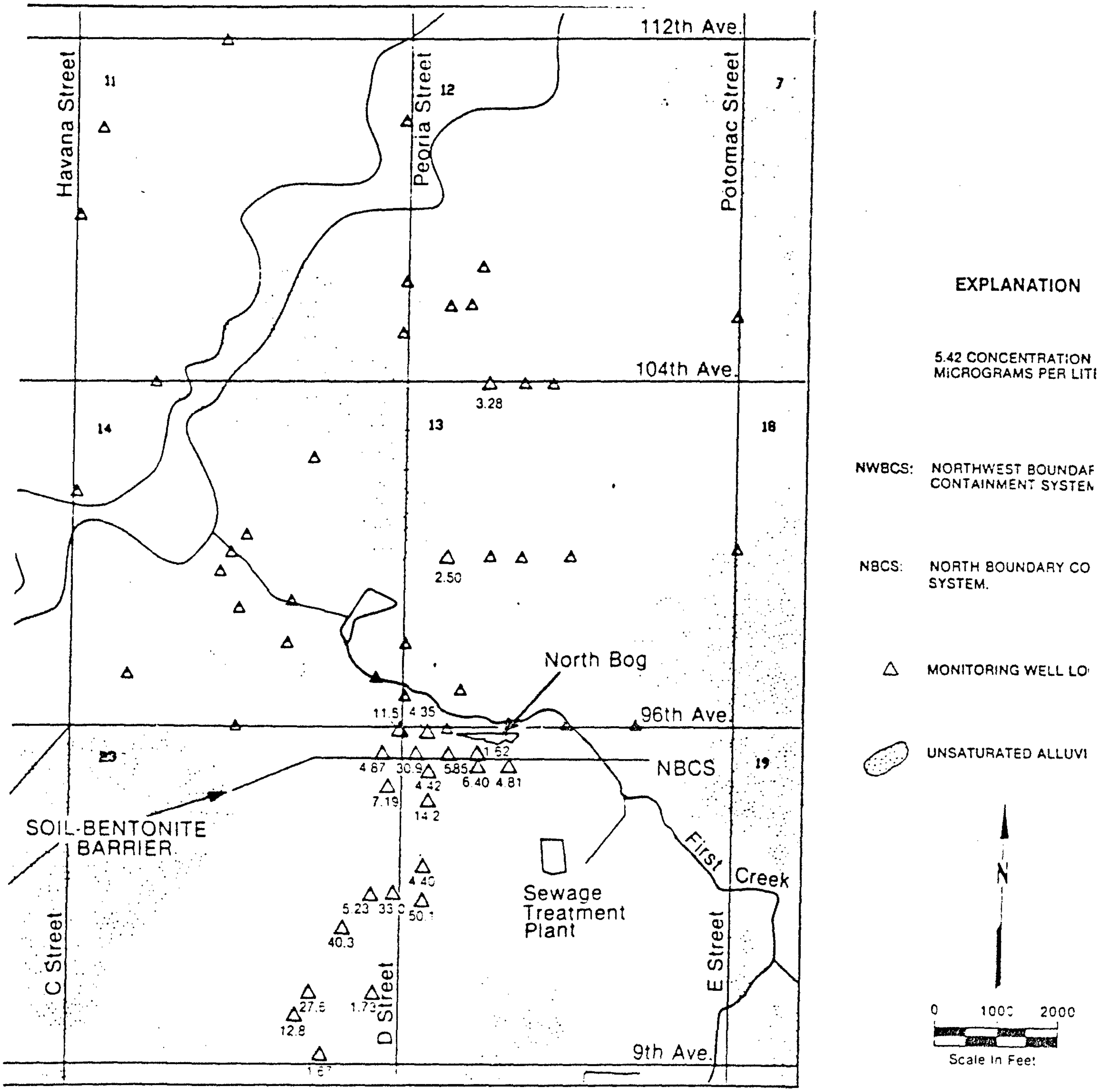


Figure F-12
CPMS CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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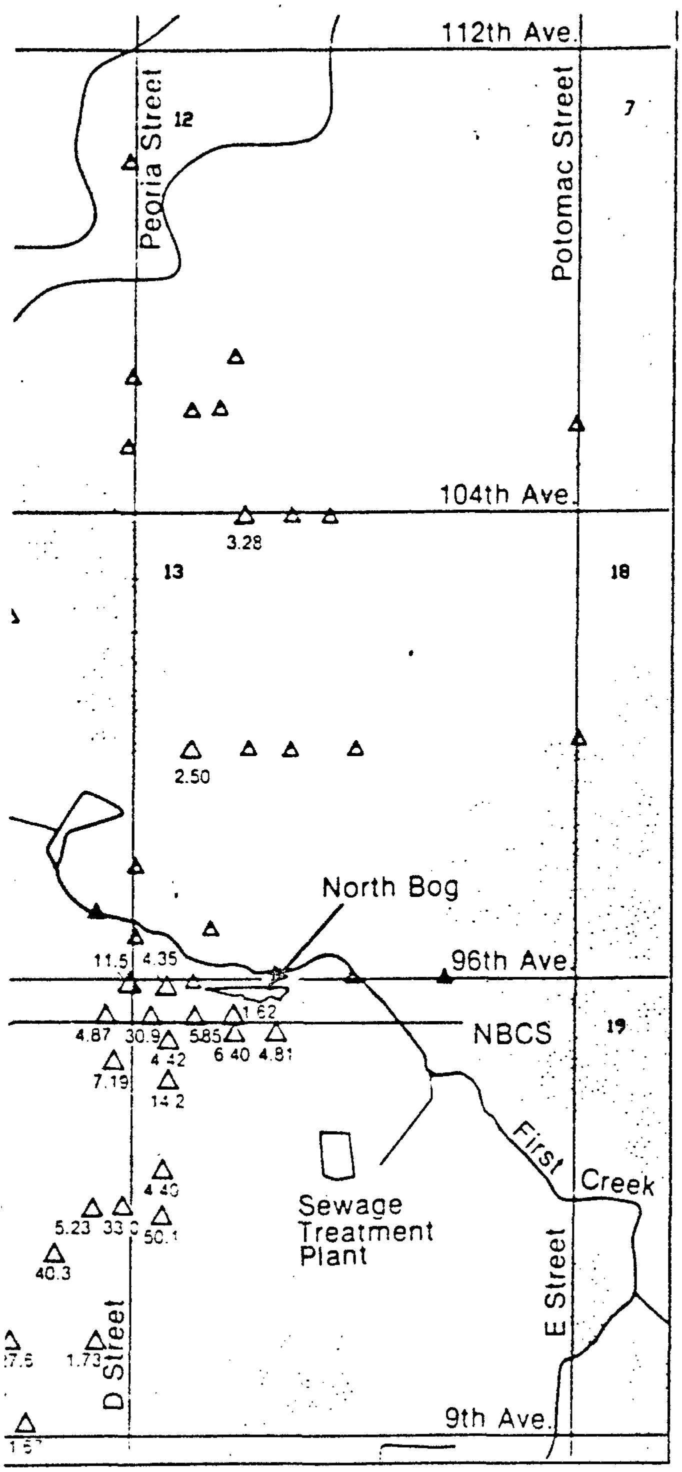
For Rocky Mountain Arsena

Aberdeen Proving Ground, Maryland



EXPLANATION

5.42 CONCENTRATION IN MICROGRAMS PER LITER (ug/l)

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

△ MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale In Feet

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

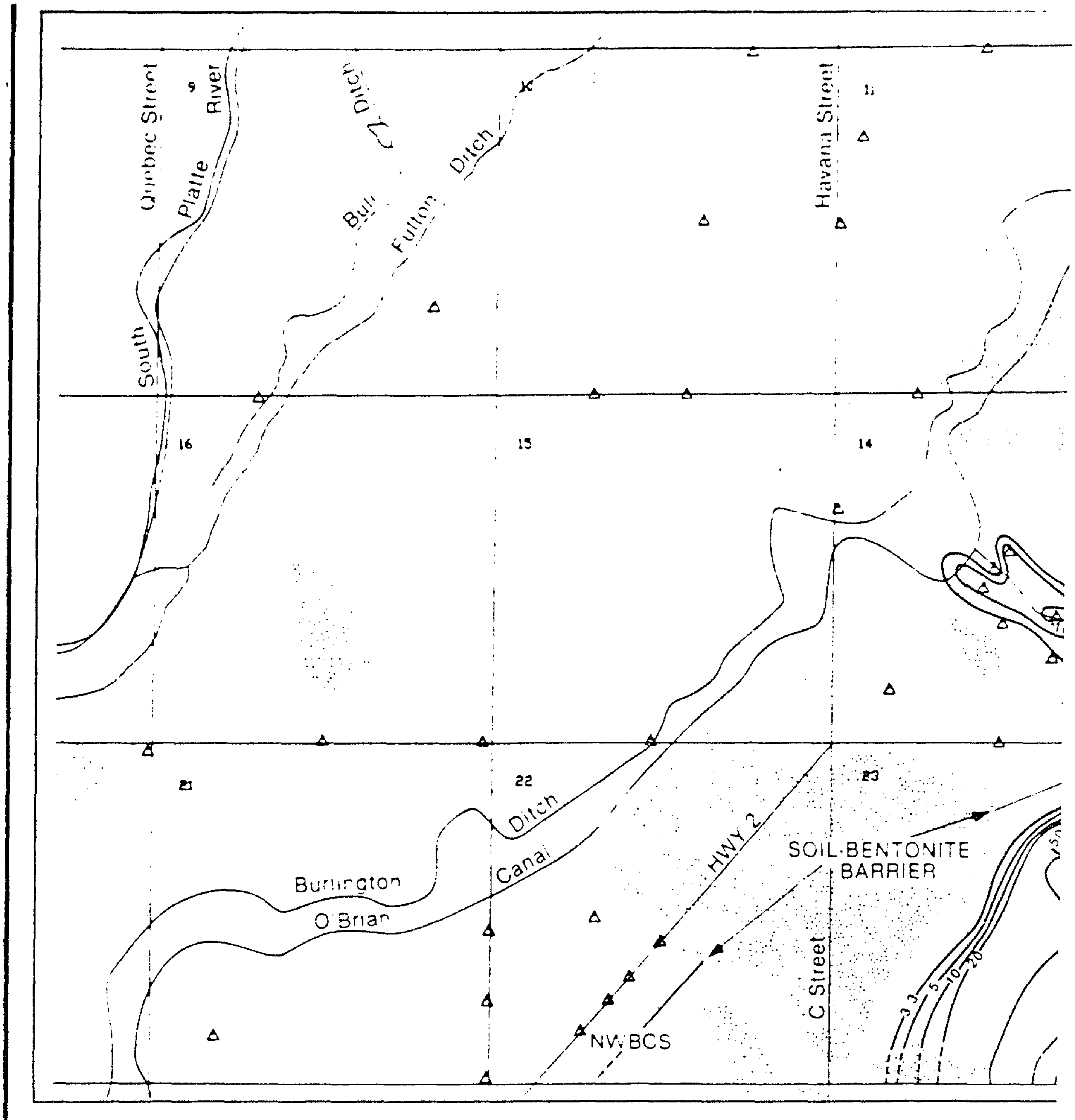
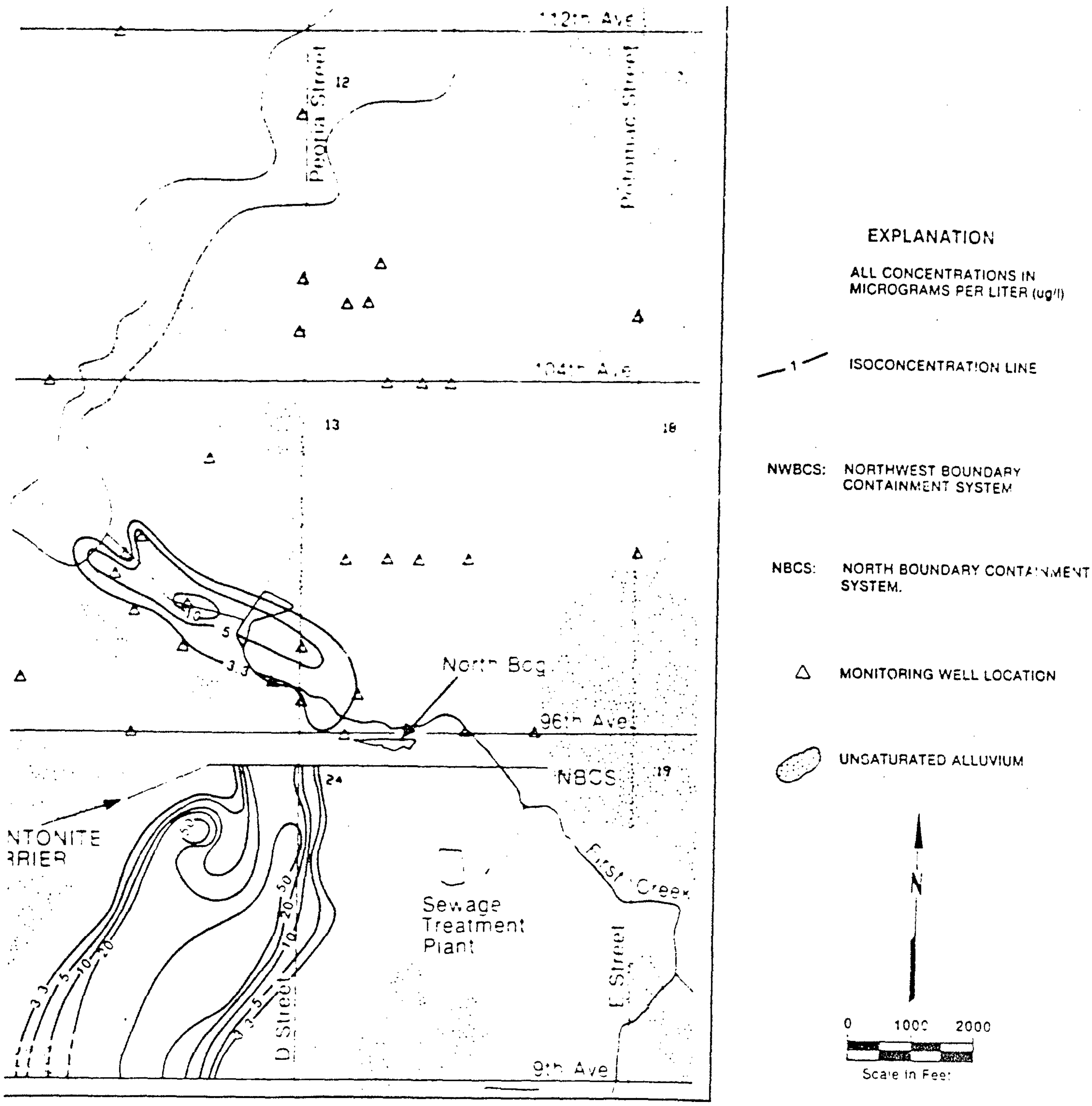


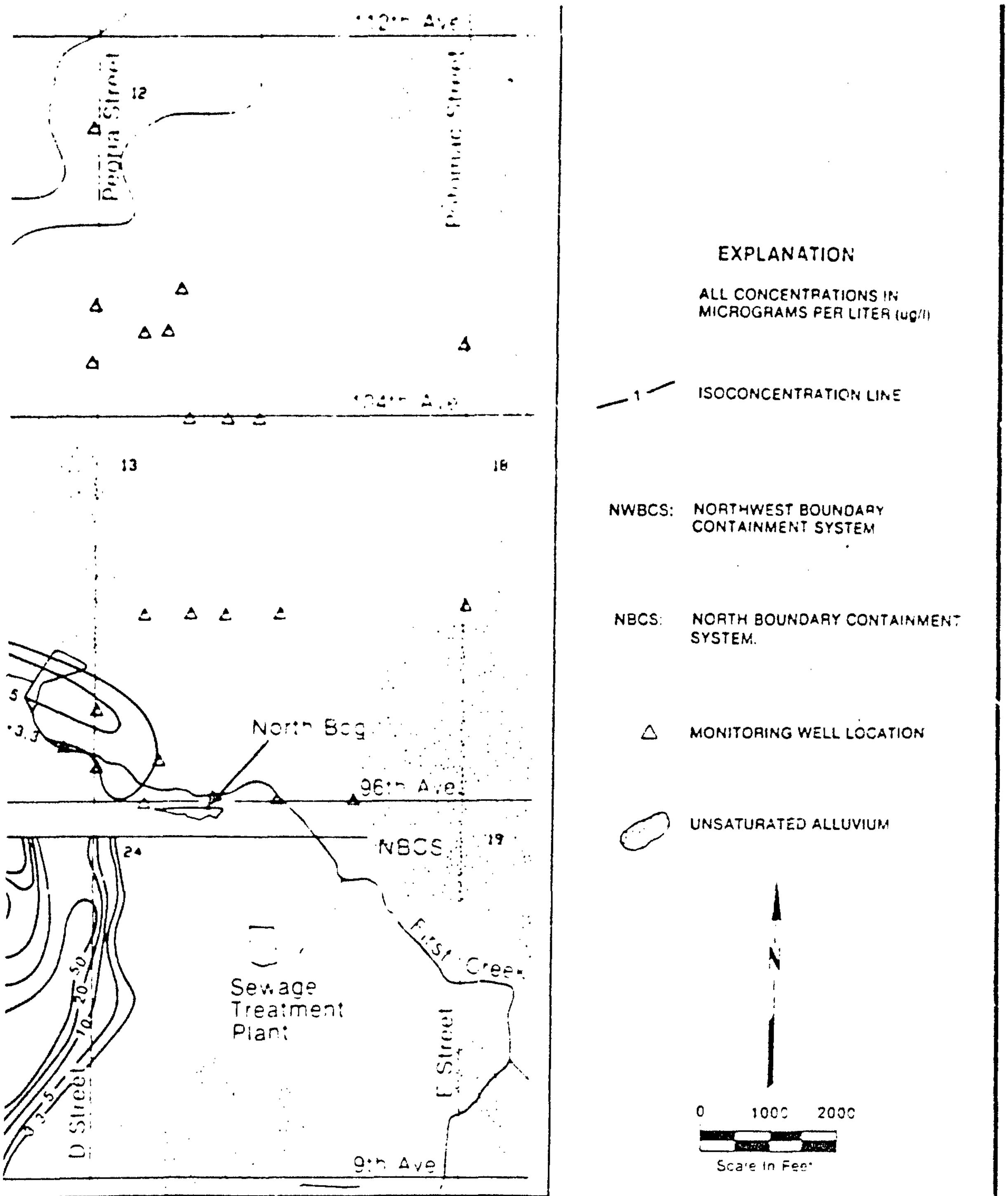
Figure F-13
1,4 DITHIANE CONCENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87,ALLUVIAL AQUIFER

SOURCE:ESE 1988



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

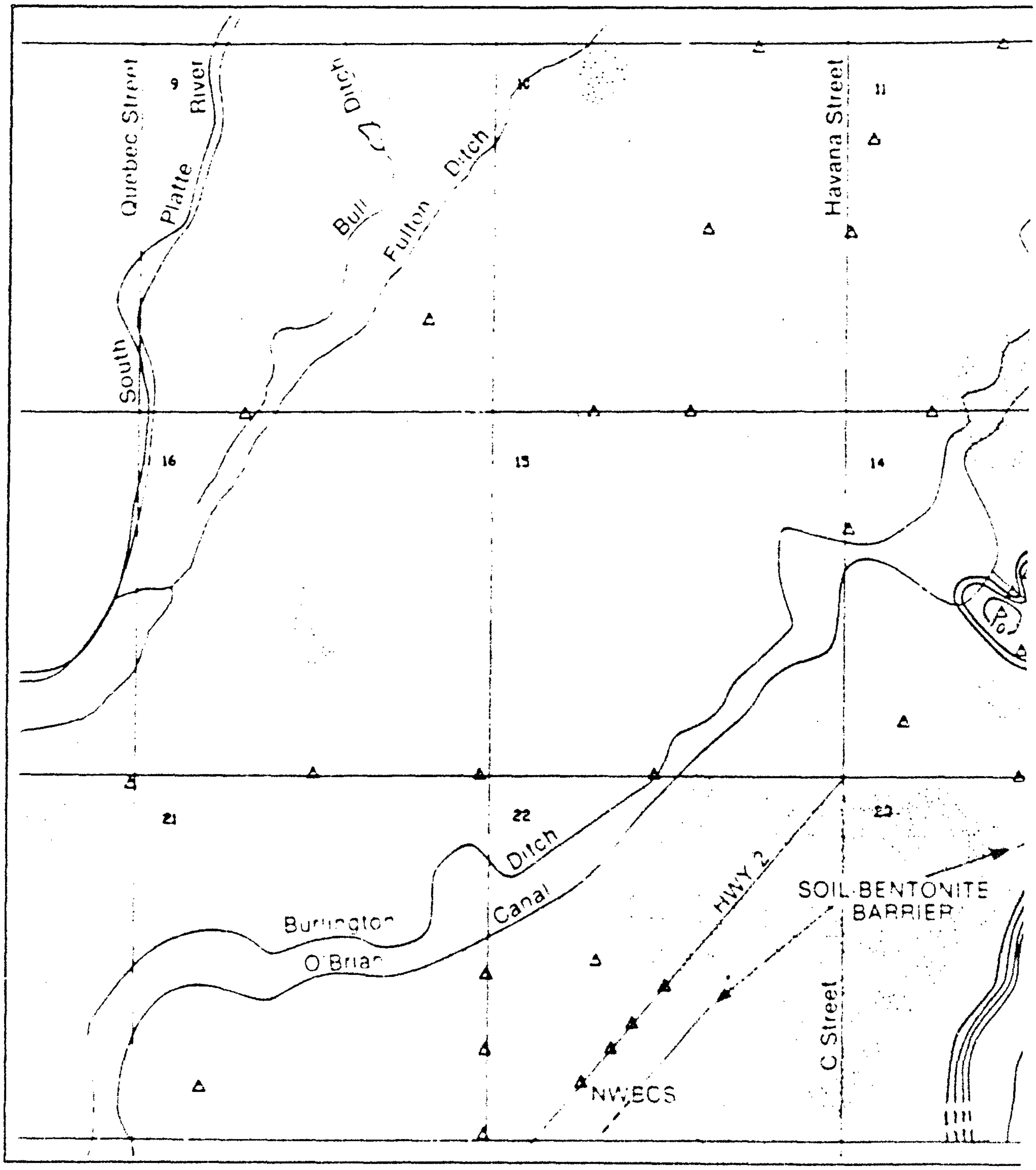
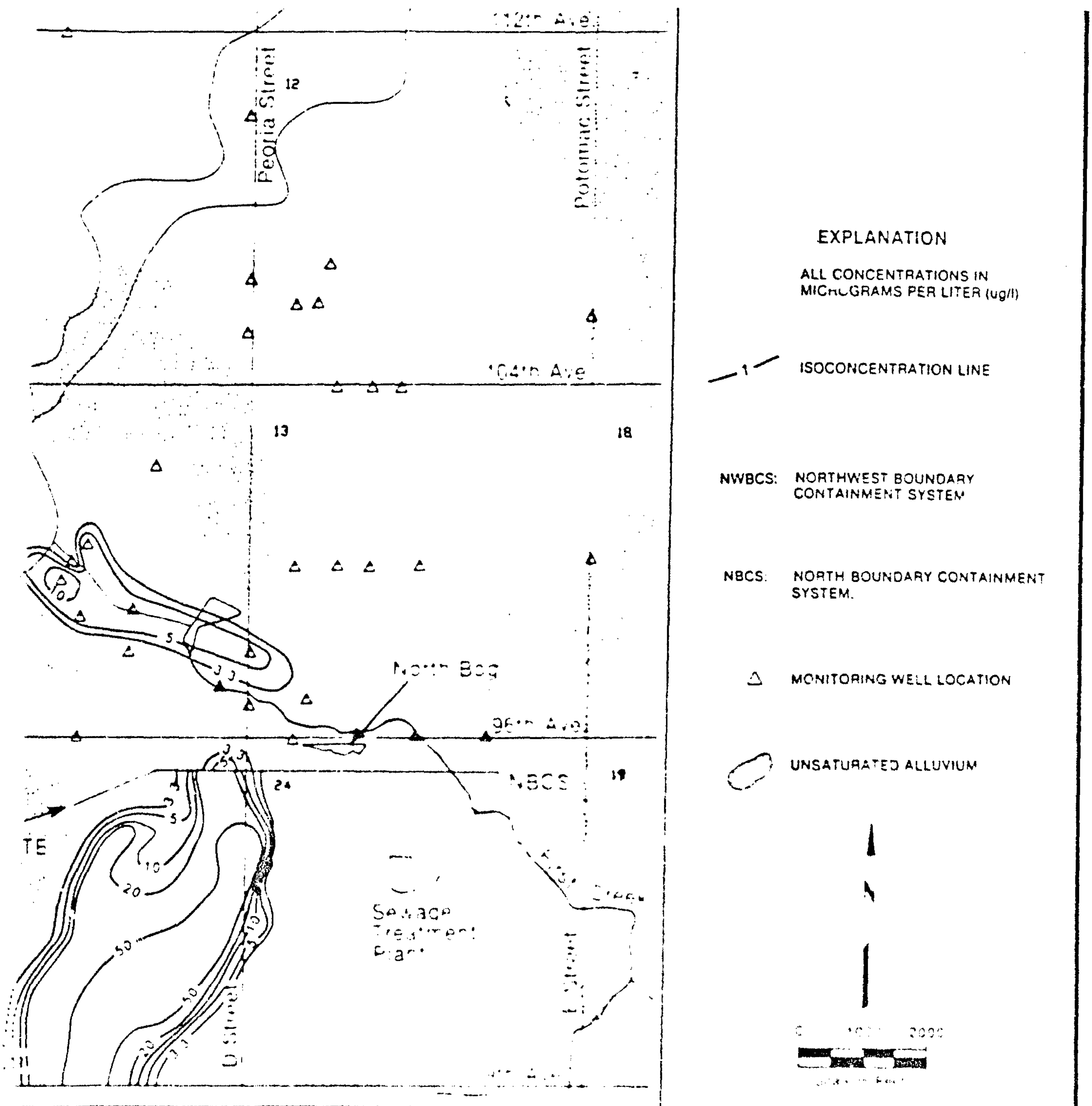


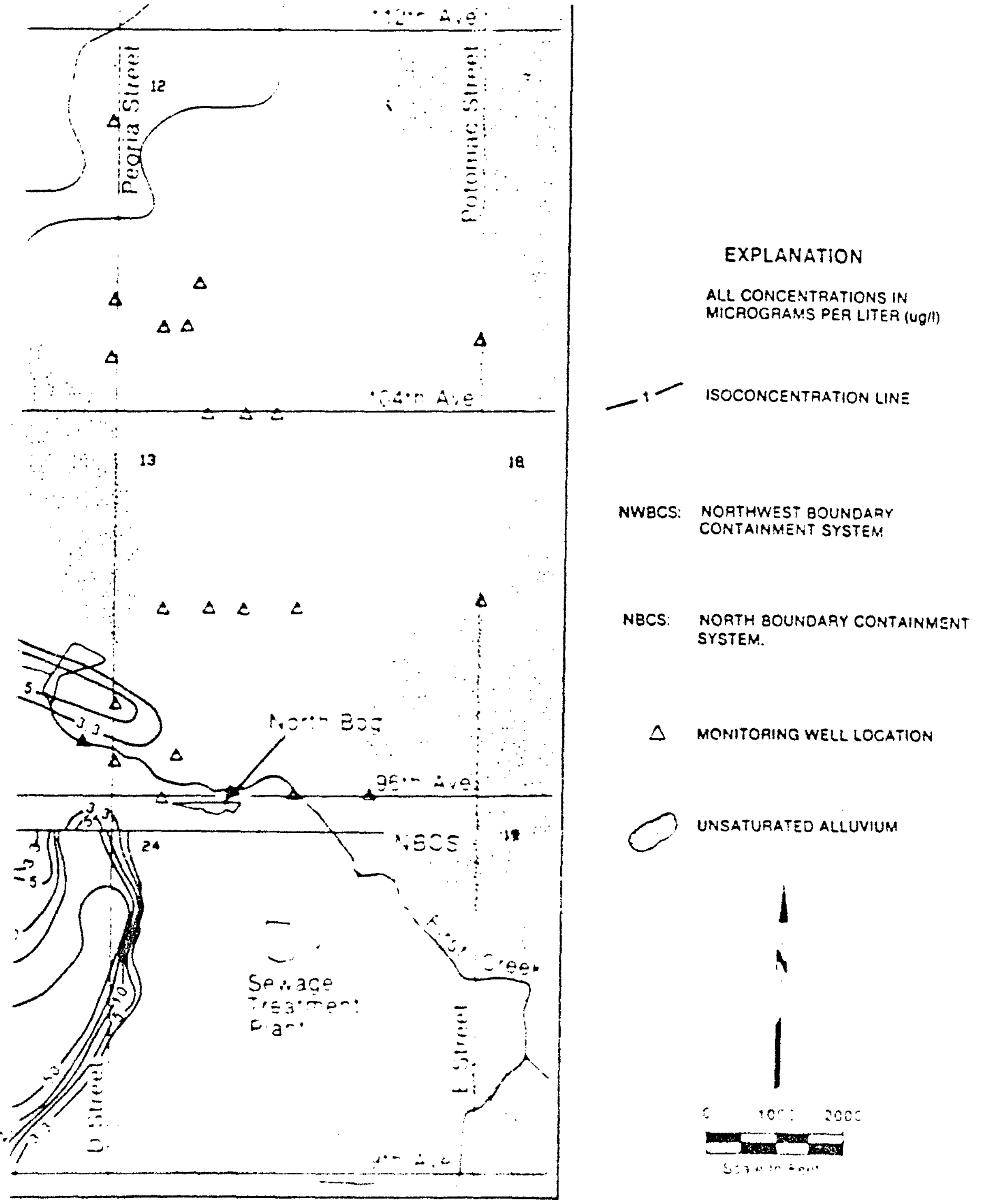
Figure F-14
1,4 DITHIANE CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

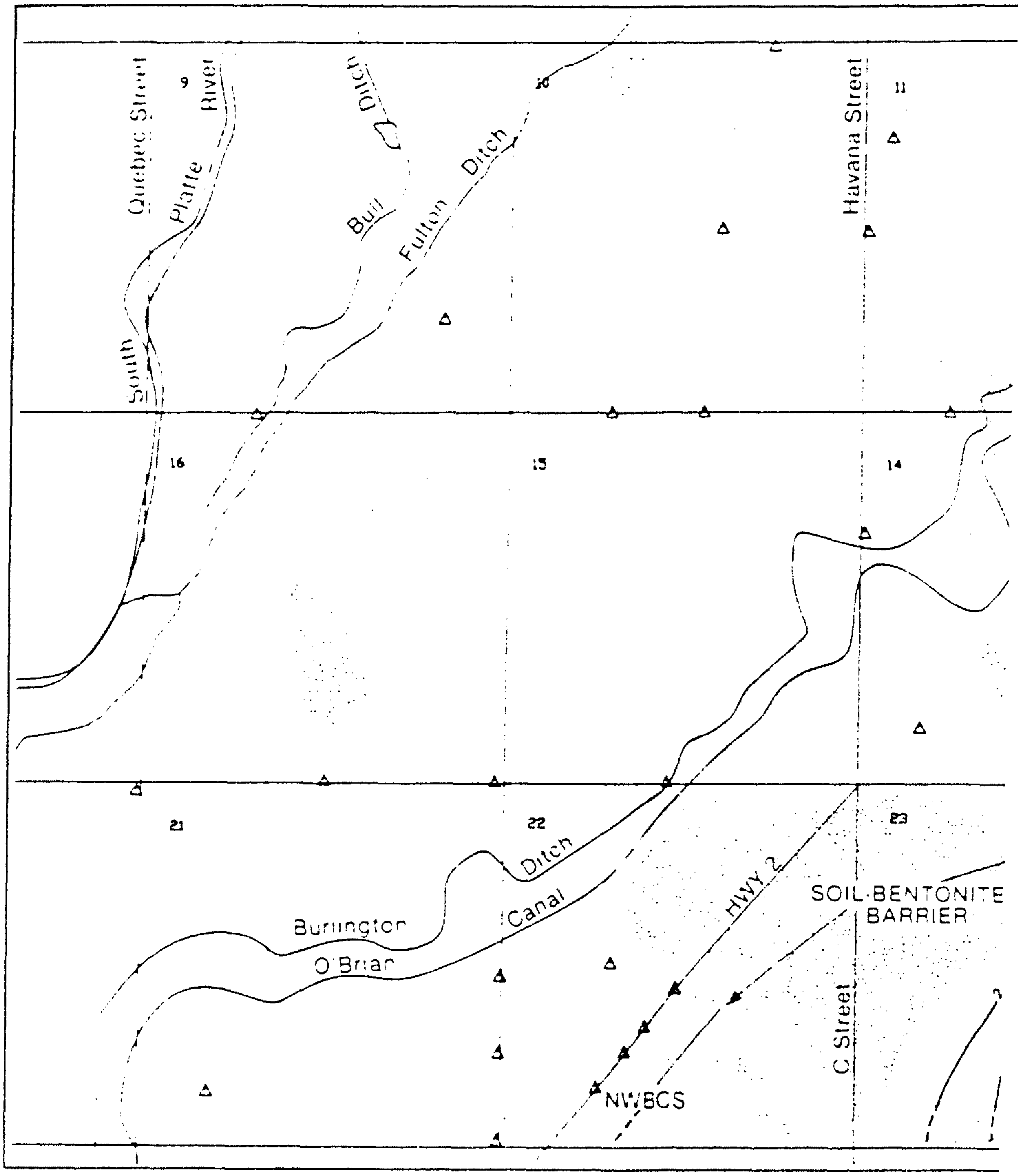
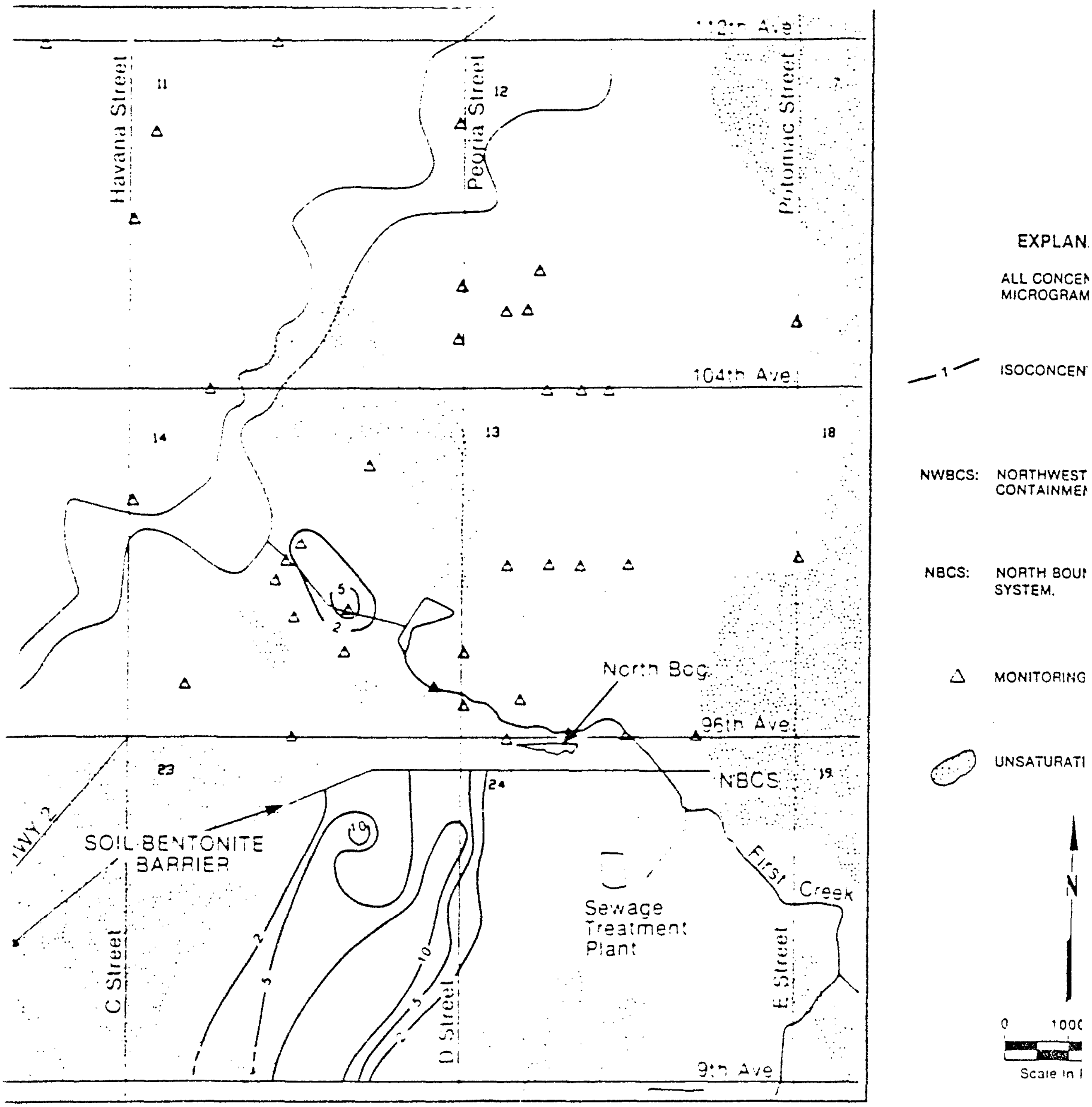


Figure F-15
1,4 OXATHIANE CONTENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE EBE 1988



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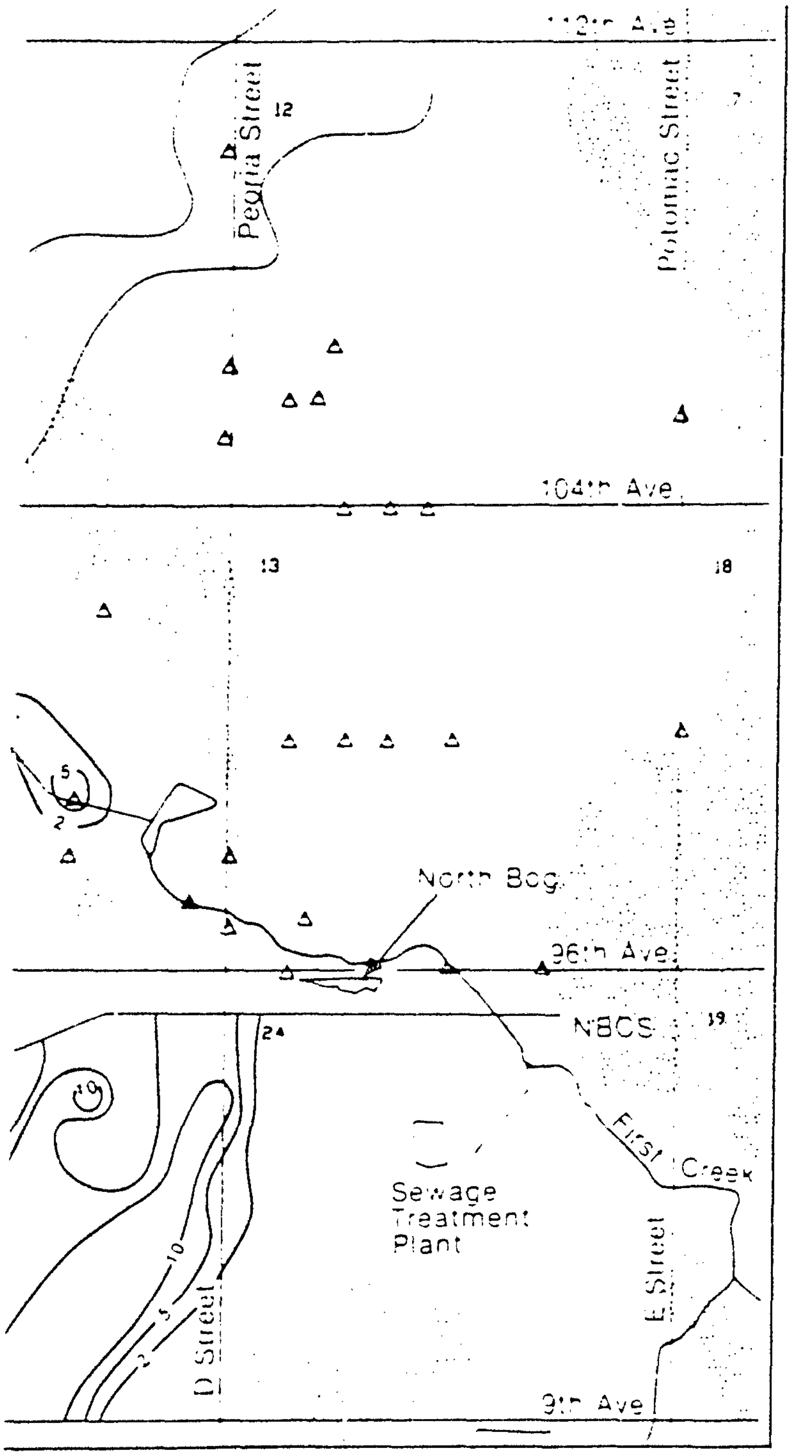
For Rocky Mountain A

Aberdeen Proving Ground, Ma



EXPLANATION

ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l)

1 ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

△ MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale in Feet

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

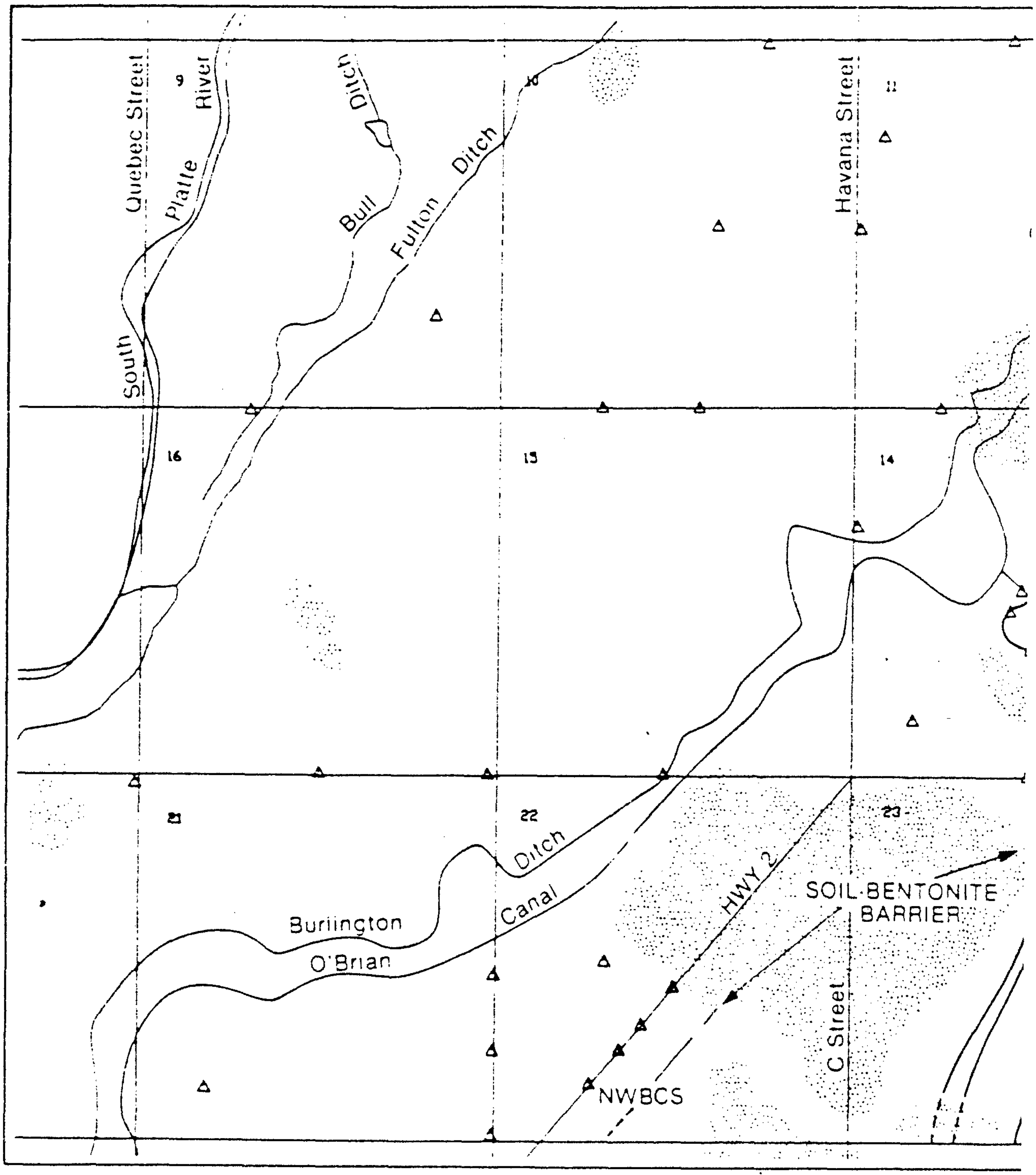
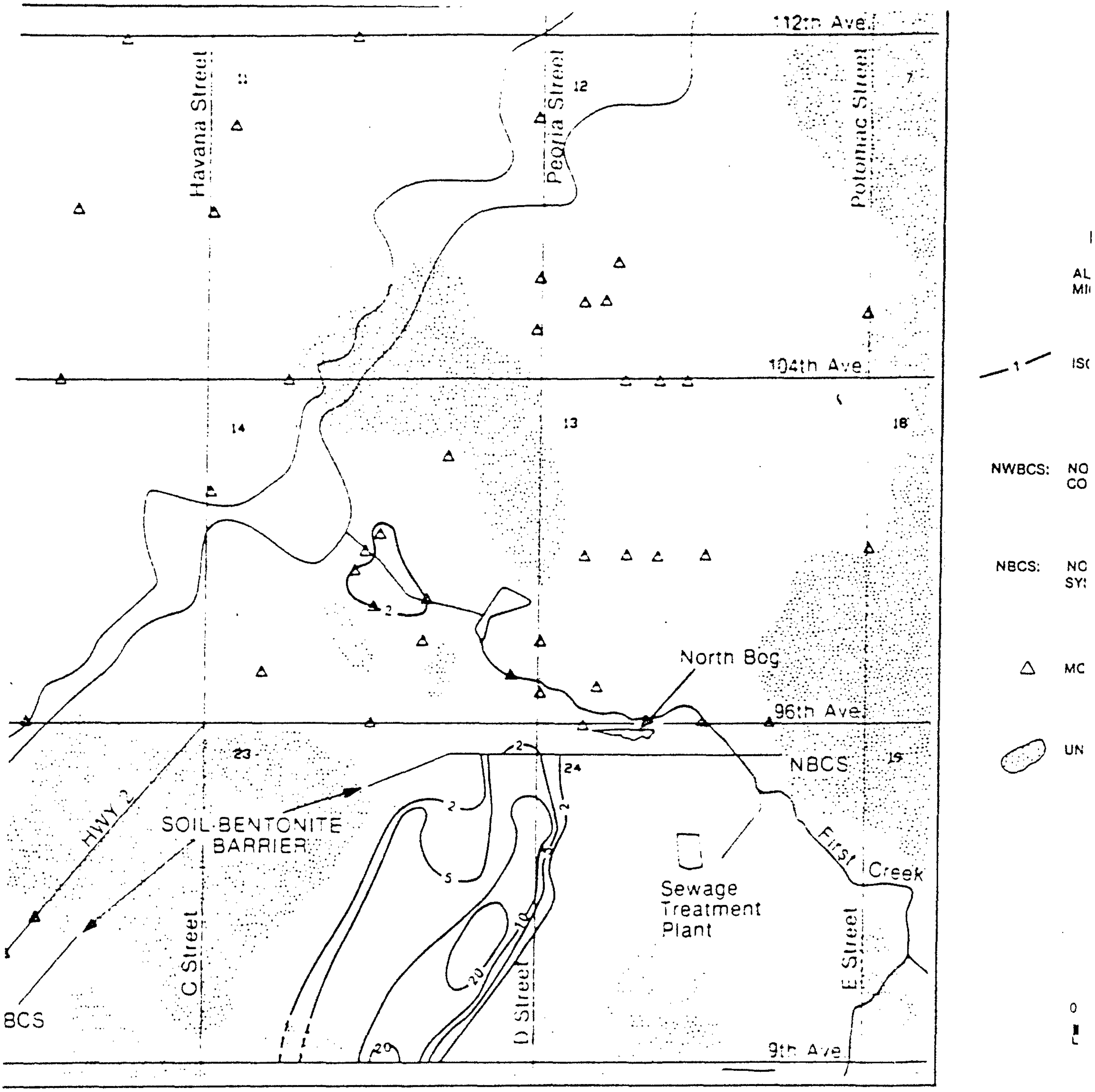


Figure F-16
1,4 OXATHAINE CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



Prepared for:
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For Rocky Mouı

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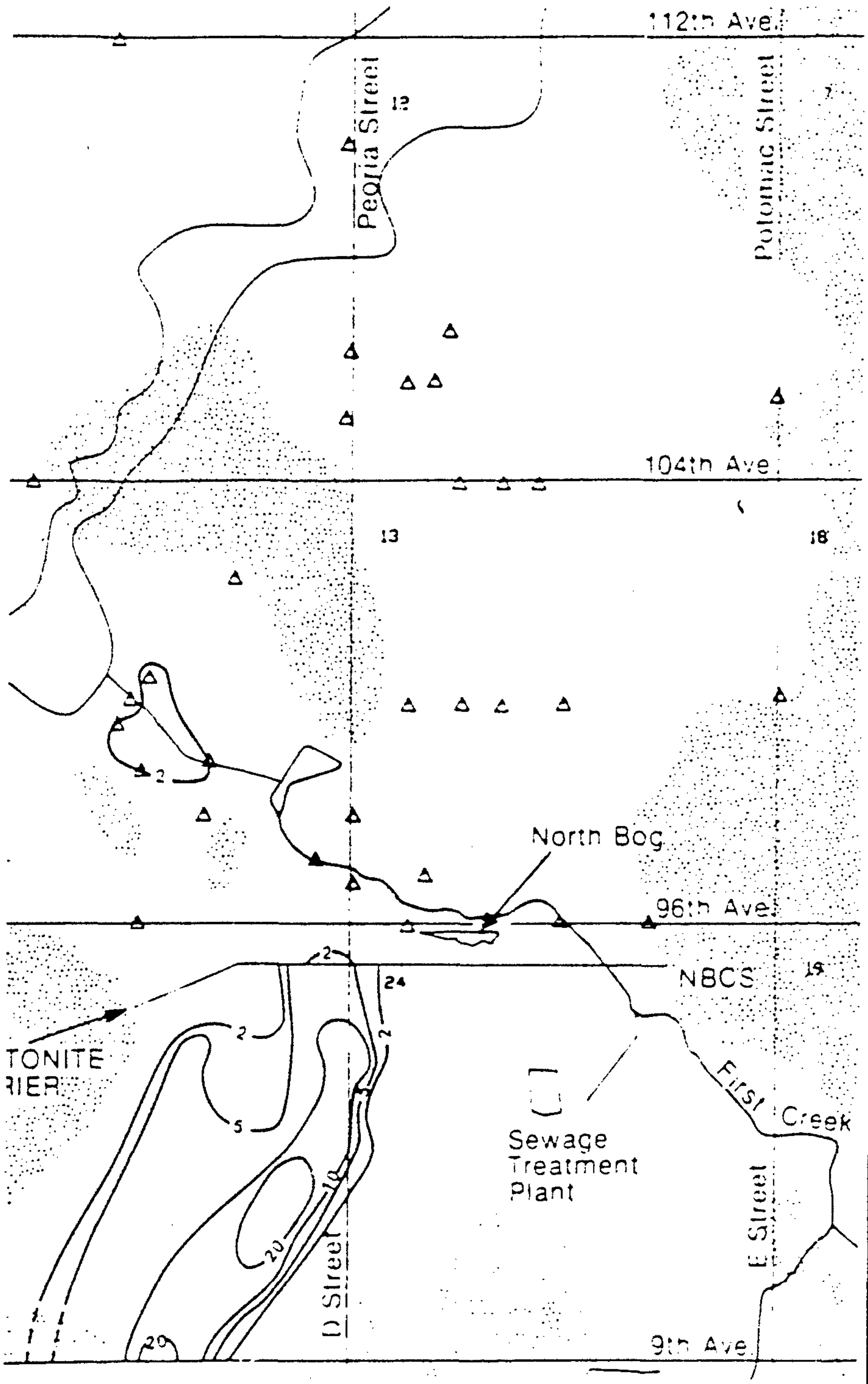

EXPLANATION

ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l)

1 ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

△ MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

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Scale in Feet

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

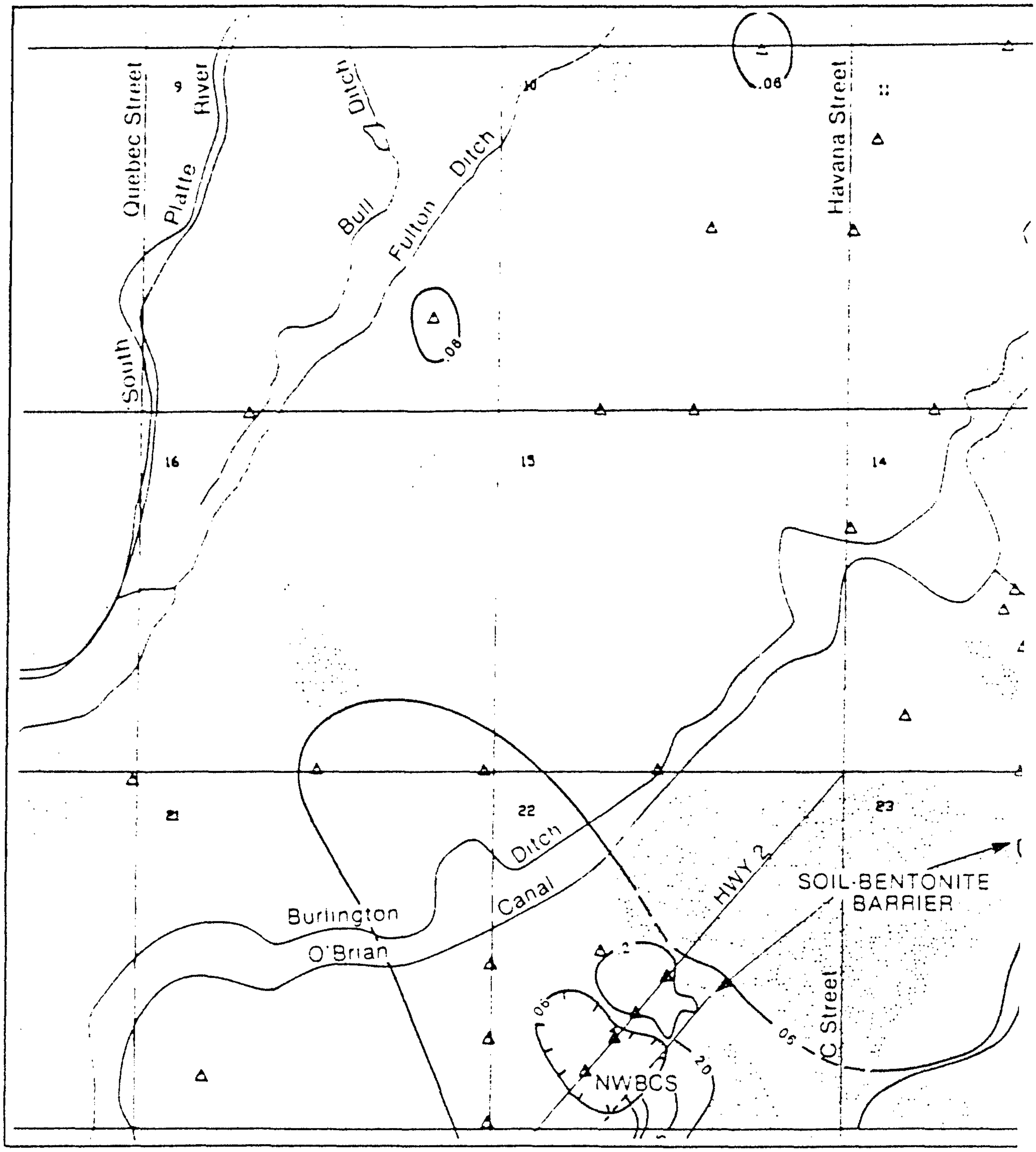
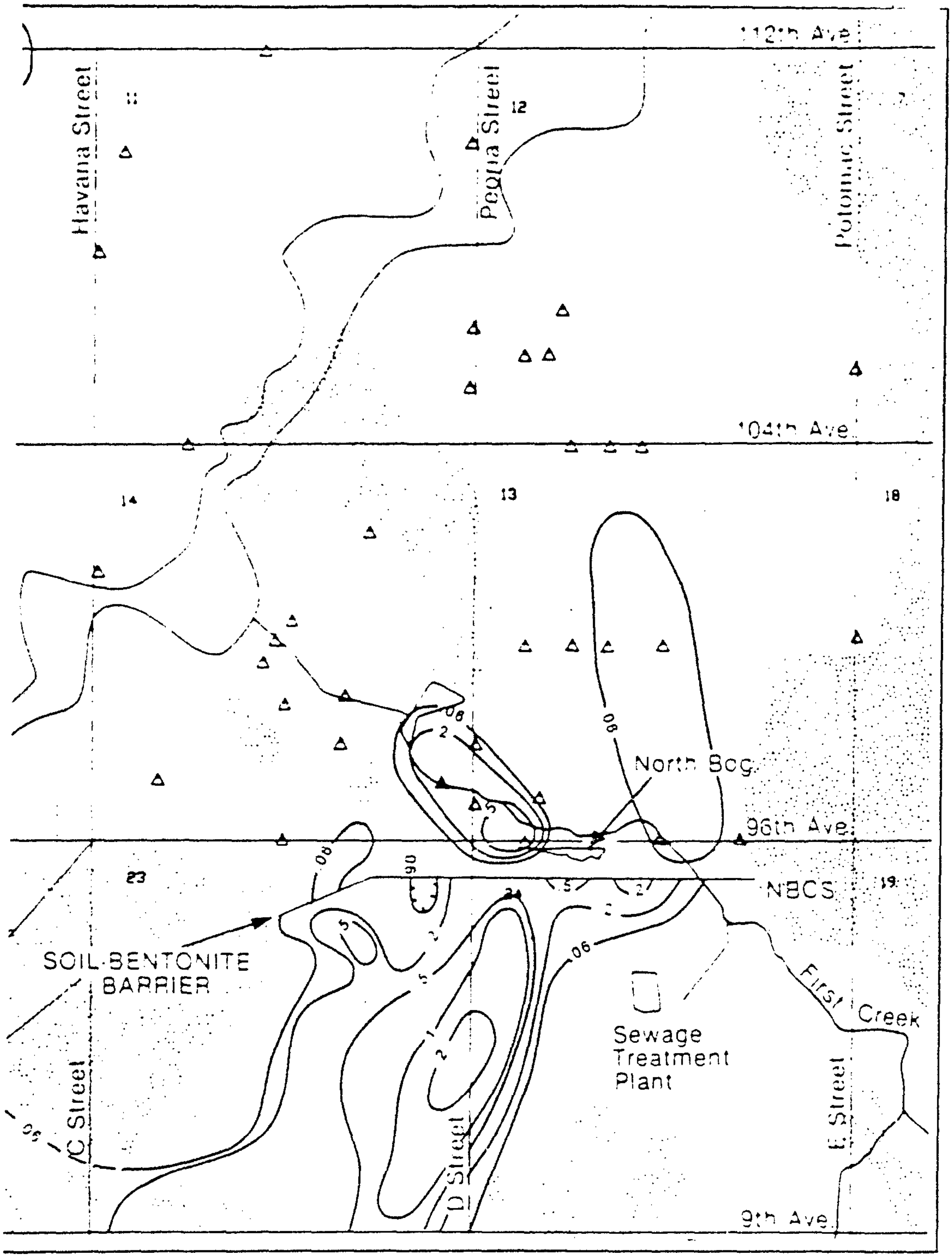


Figure F-17
DIELDRIN CONCENTRATION DISTRIBUTION, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



EXPLANATION

ALL CONCENTRATIC
MICROGRAMS PER I

ISOCONCENTRATIO

NWBCS: NORTHWEST BOUN
CONTAINMENT SYS

NBCS: NORTH BOUNDARY
SYSTEM.

MONITORING WELL

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Scale In Feet

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For Rocky Mountain Arse

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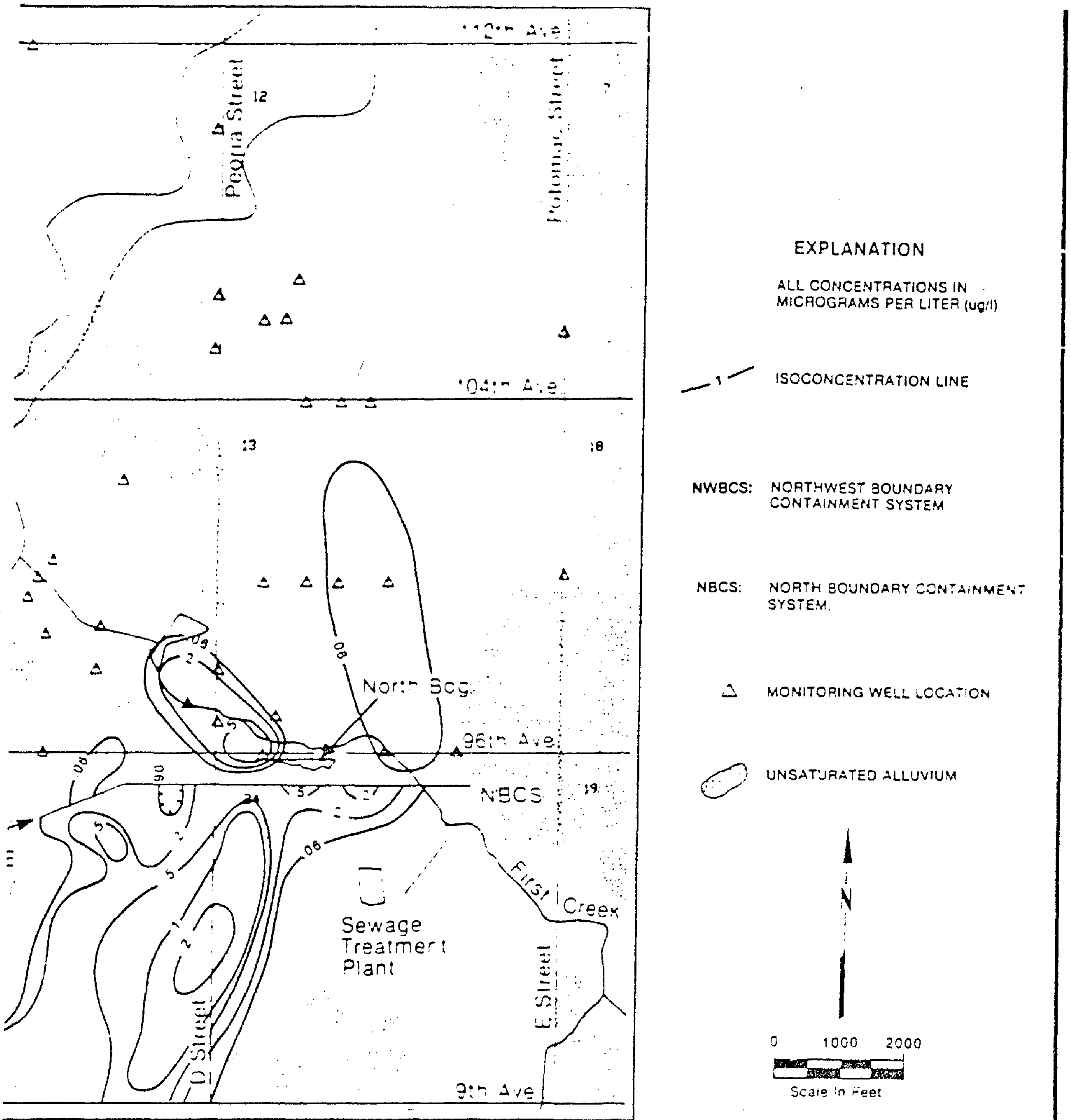


Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

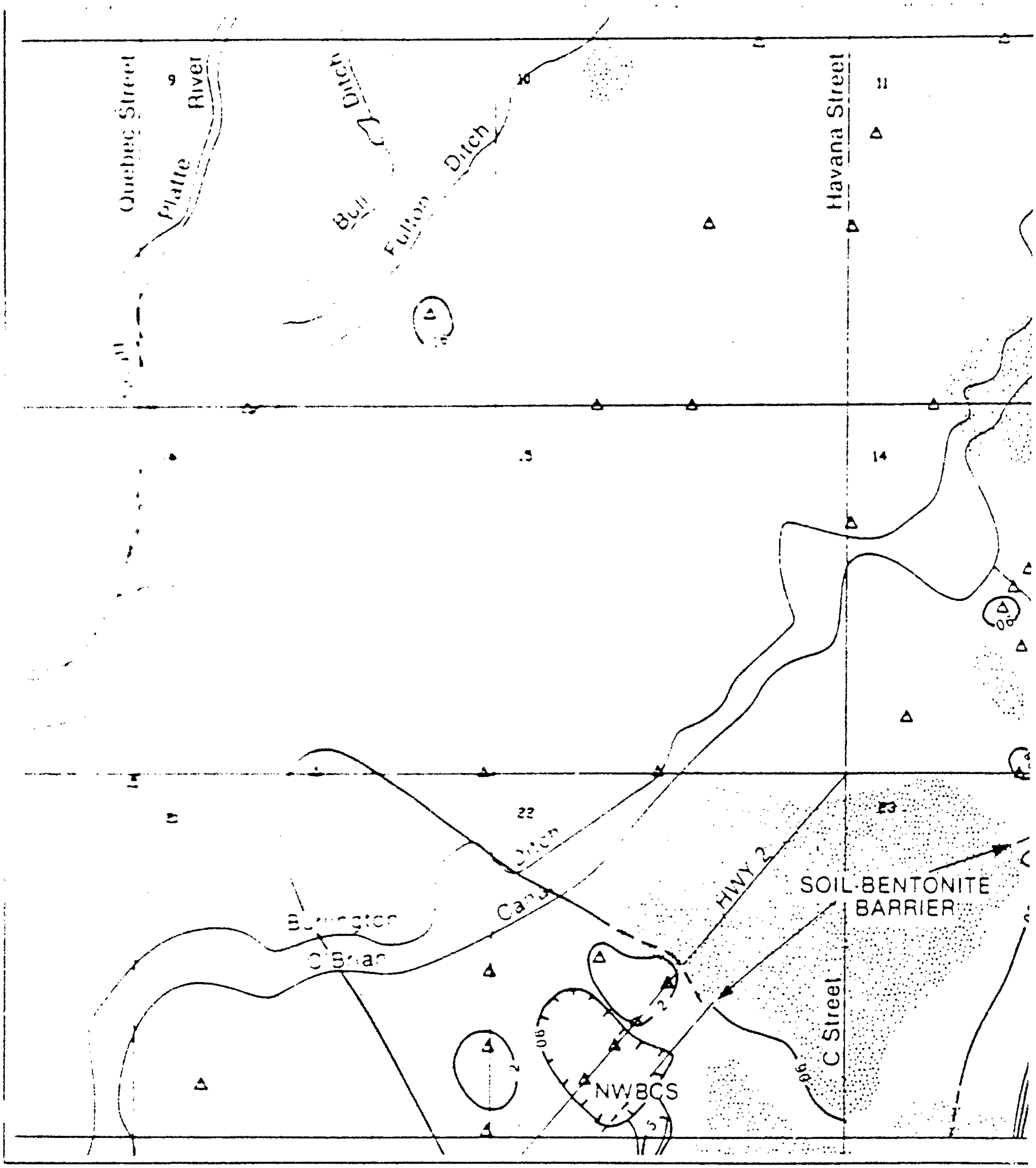
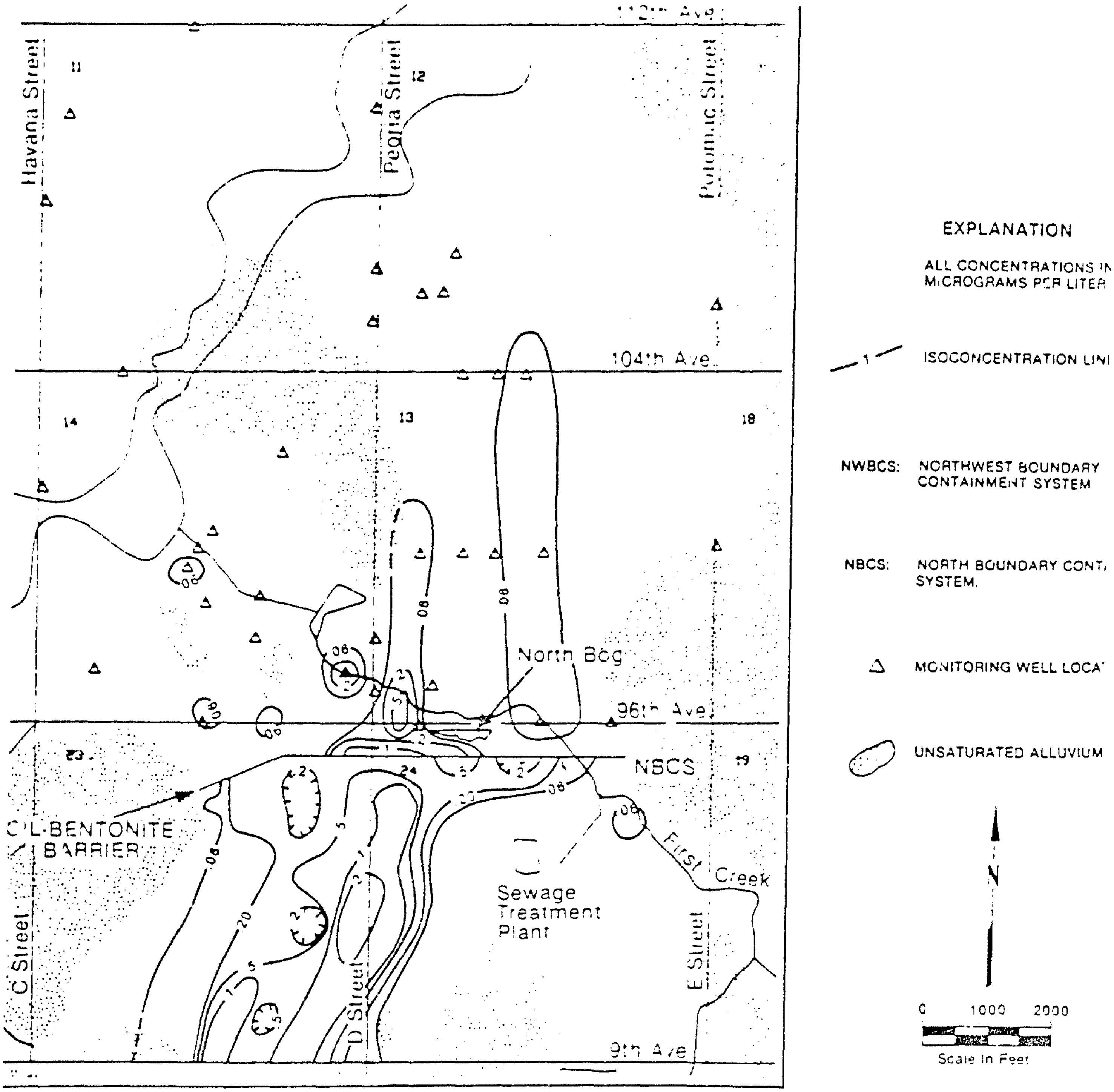


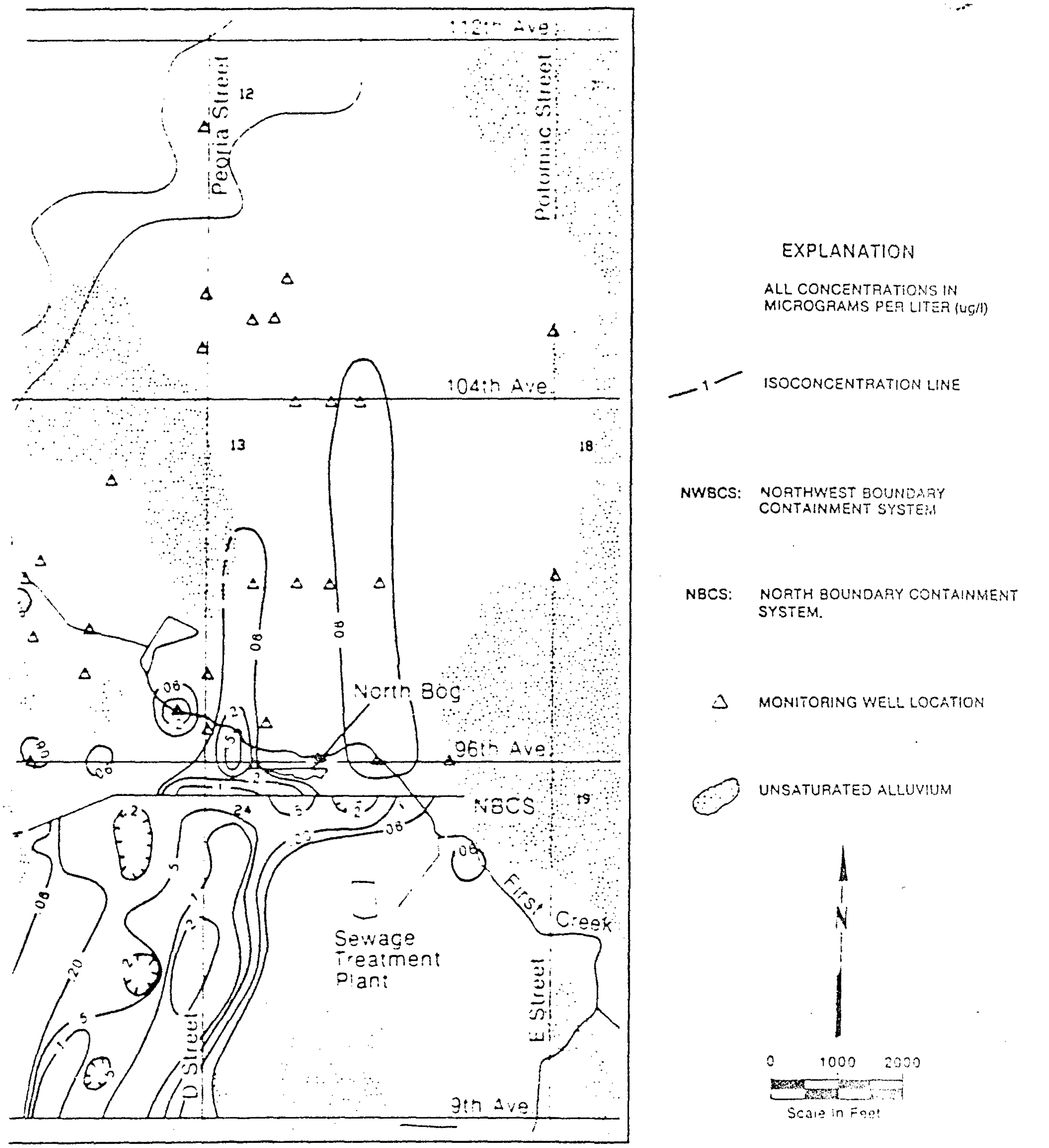
Figure F-18
DIELDRIN CONCENTRATION DISTRIBUTION, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



Prepared for:
U.S. Army Program Manager's
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

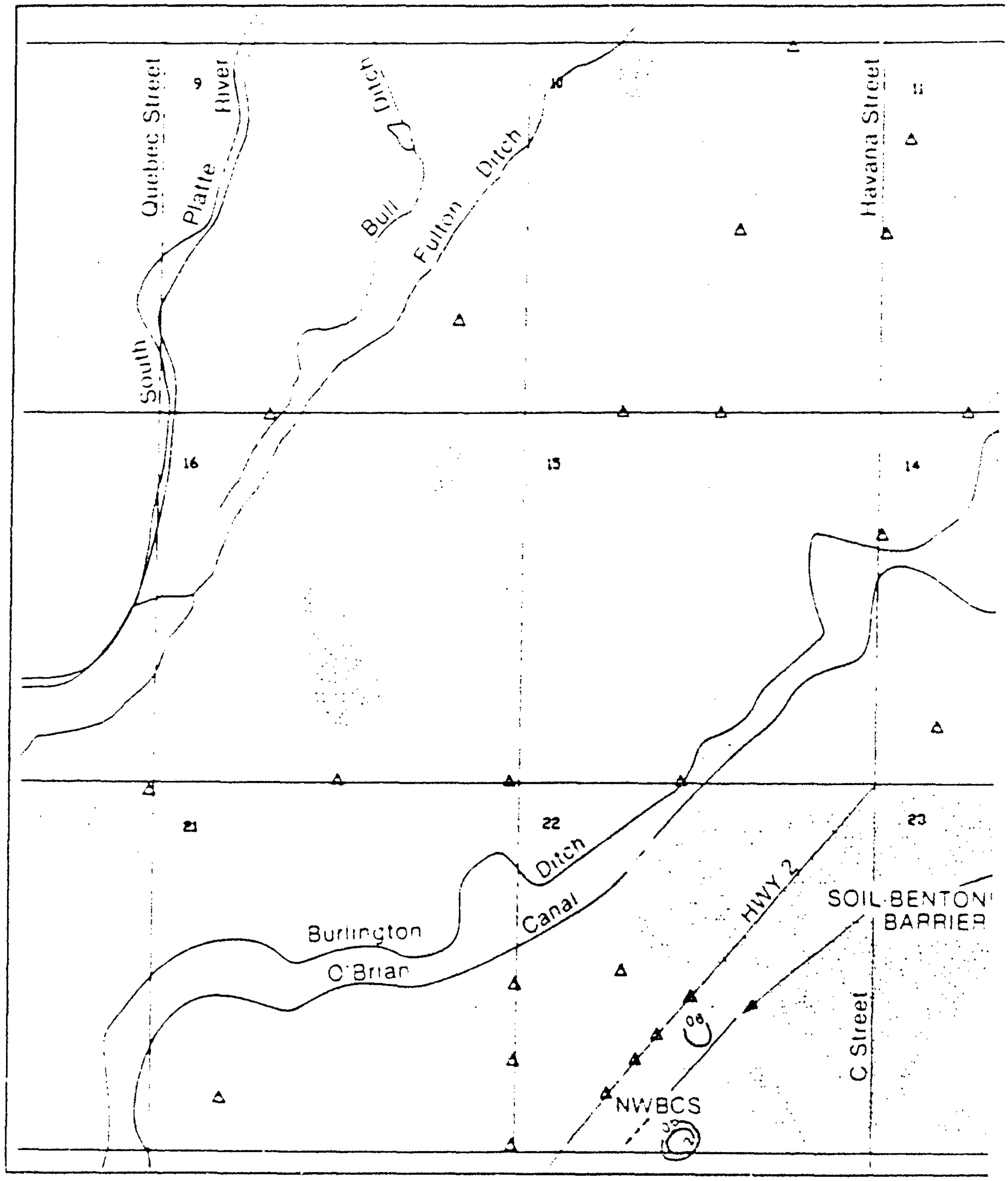
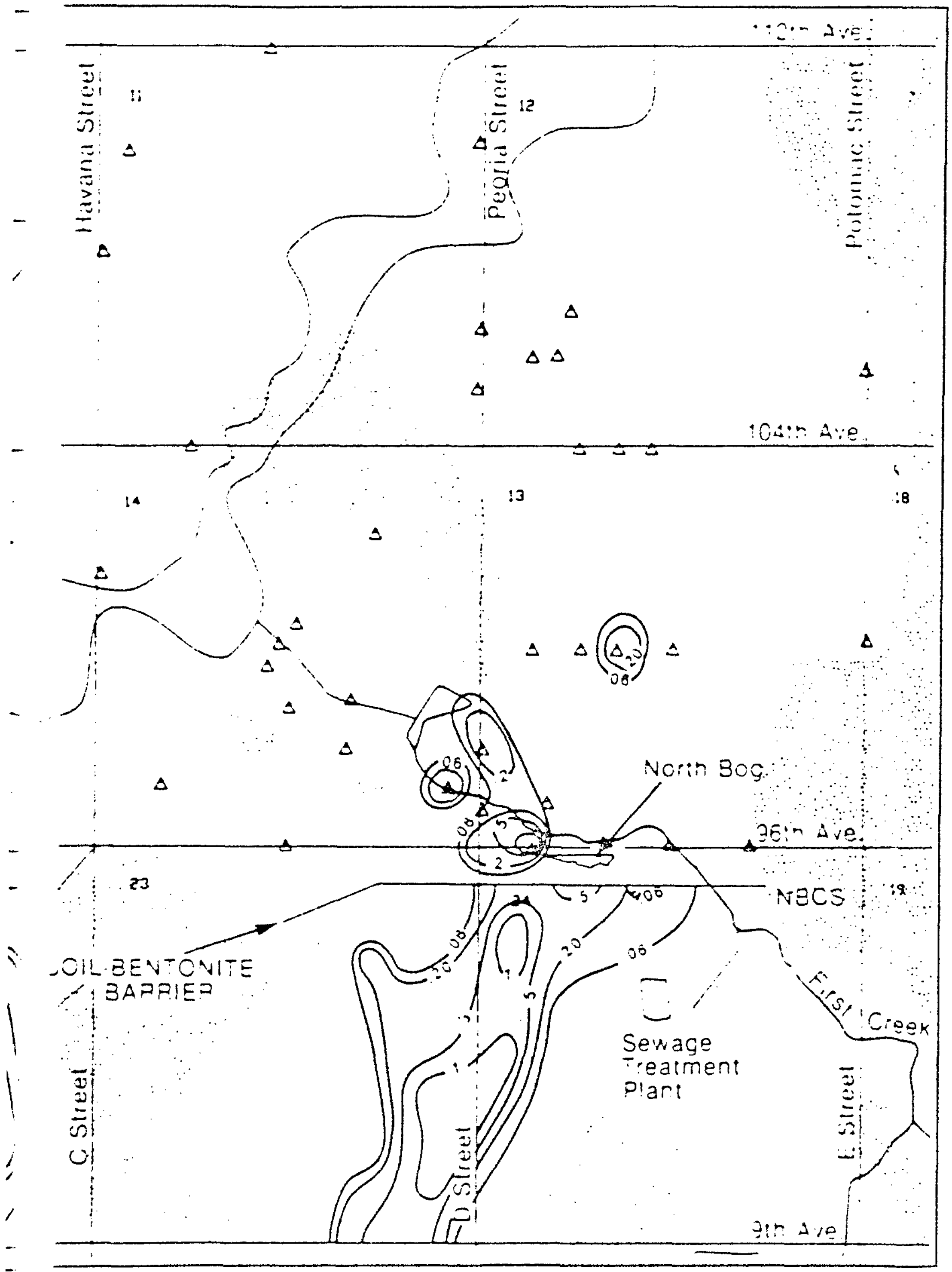


Figure F-19
ENDRIN CONCENTRATION DISTRIBUTION, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



EXPLANATION

ALL CONCENTRATIC
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NBCS: NORTH BOUNDARY (
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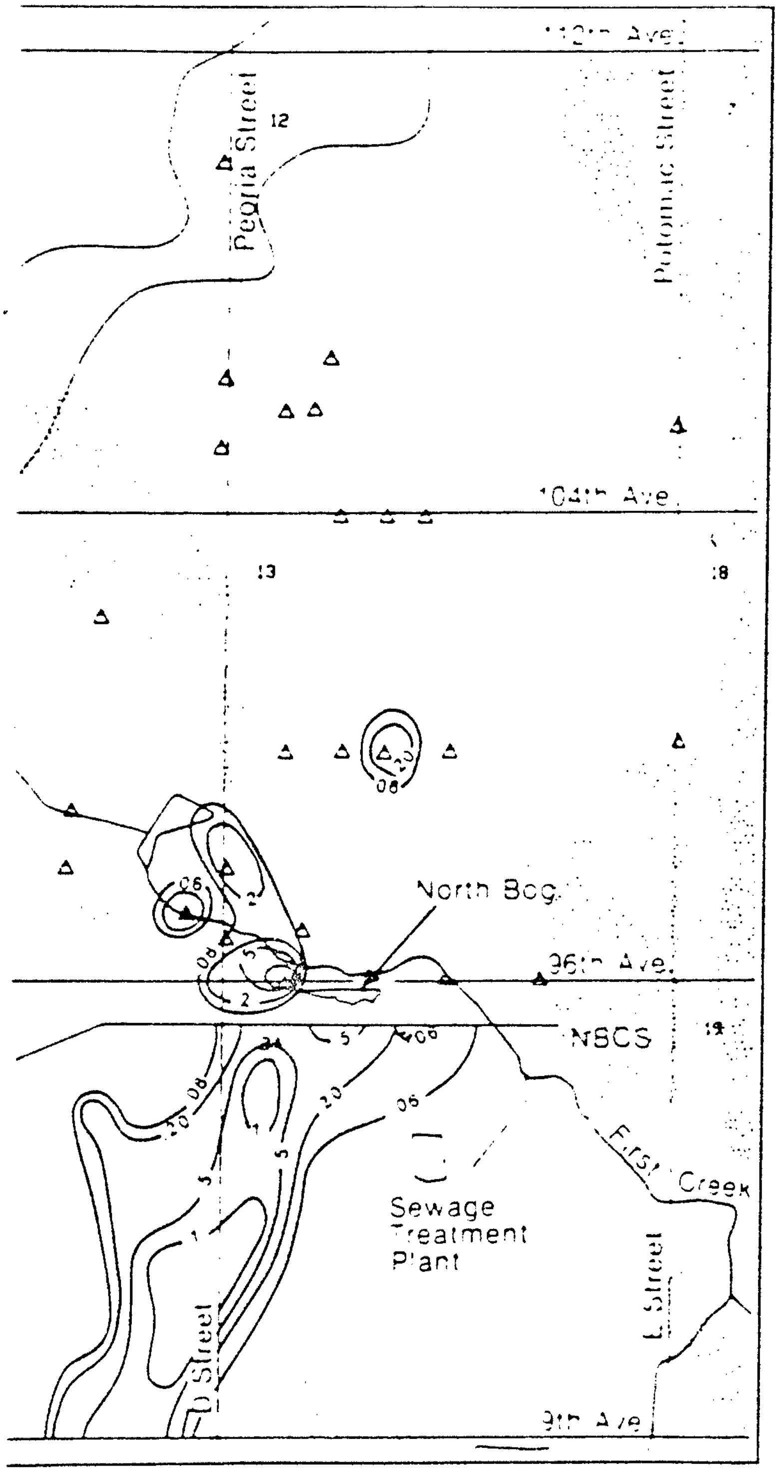

EXPLANATION

ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l)

ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

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Scale in Feet

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

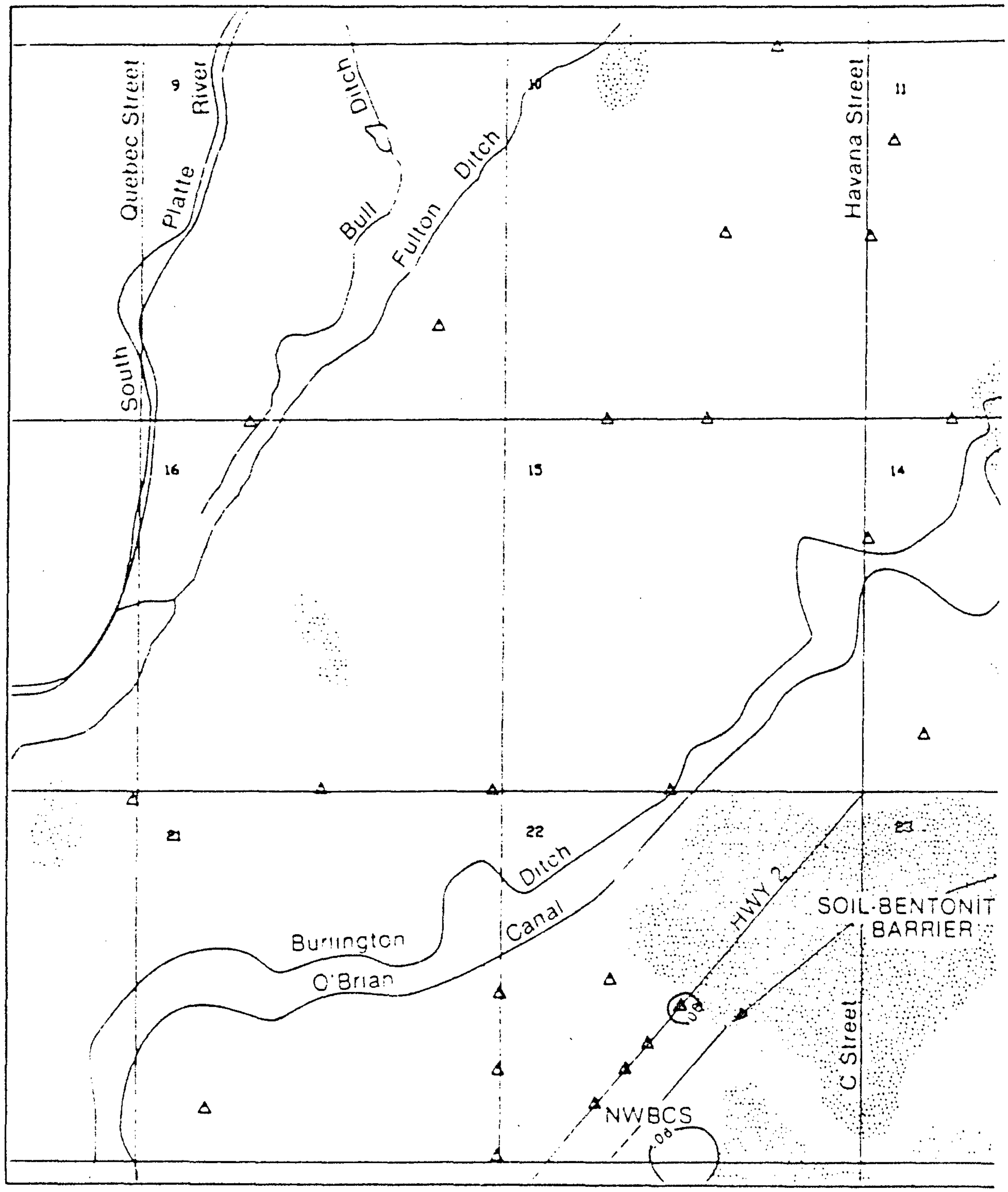
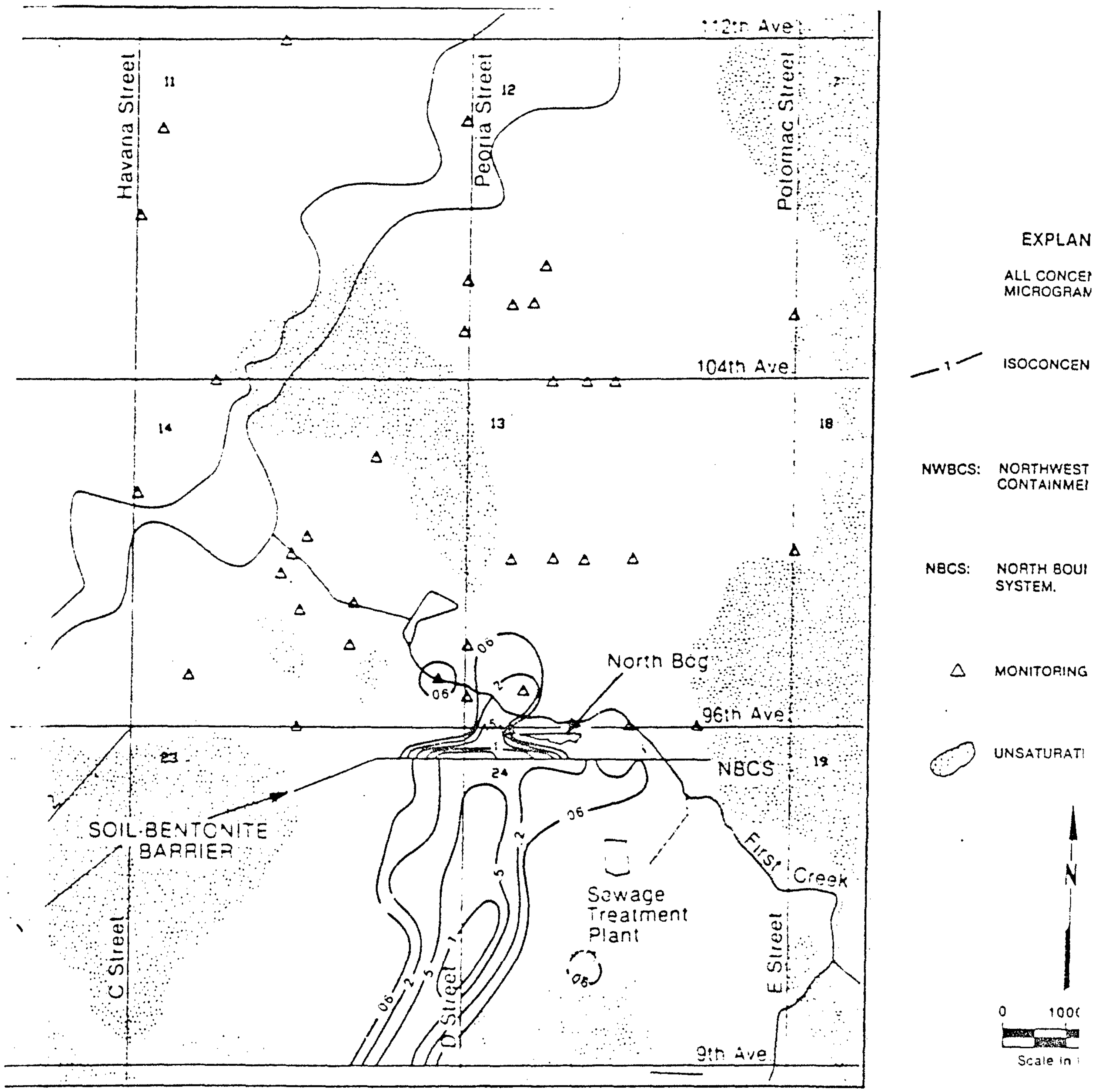
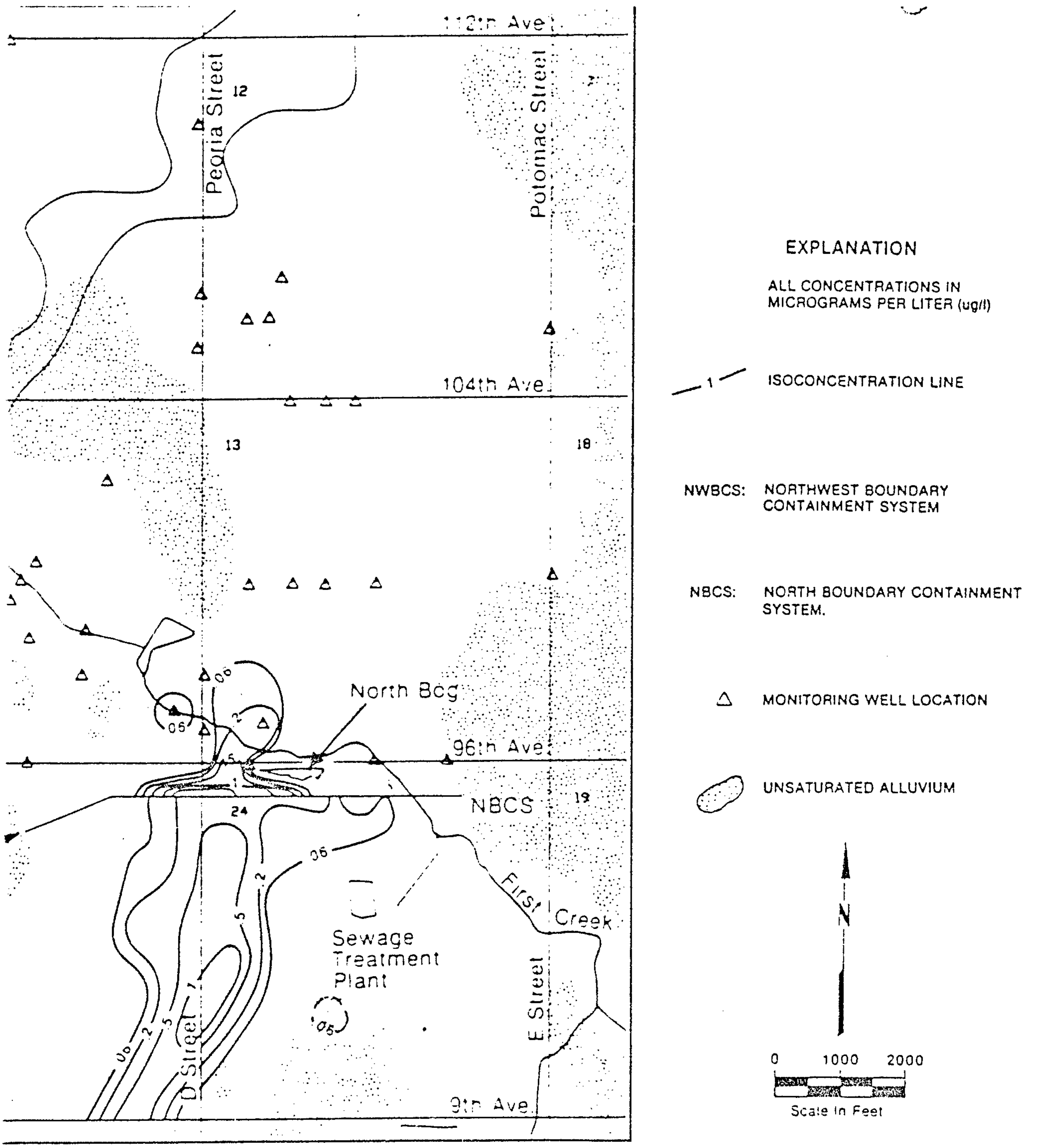


Figure F-20
ENDRIN CONCENTRATION DISTRIBUTION, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE, 1988



Prepared for:
U.S. Army Program M
For Rocky Mountain
Aberdeen Proving Ground, Ma



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

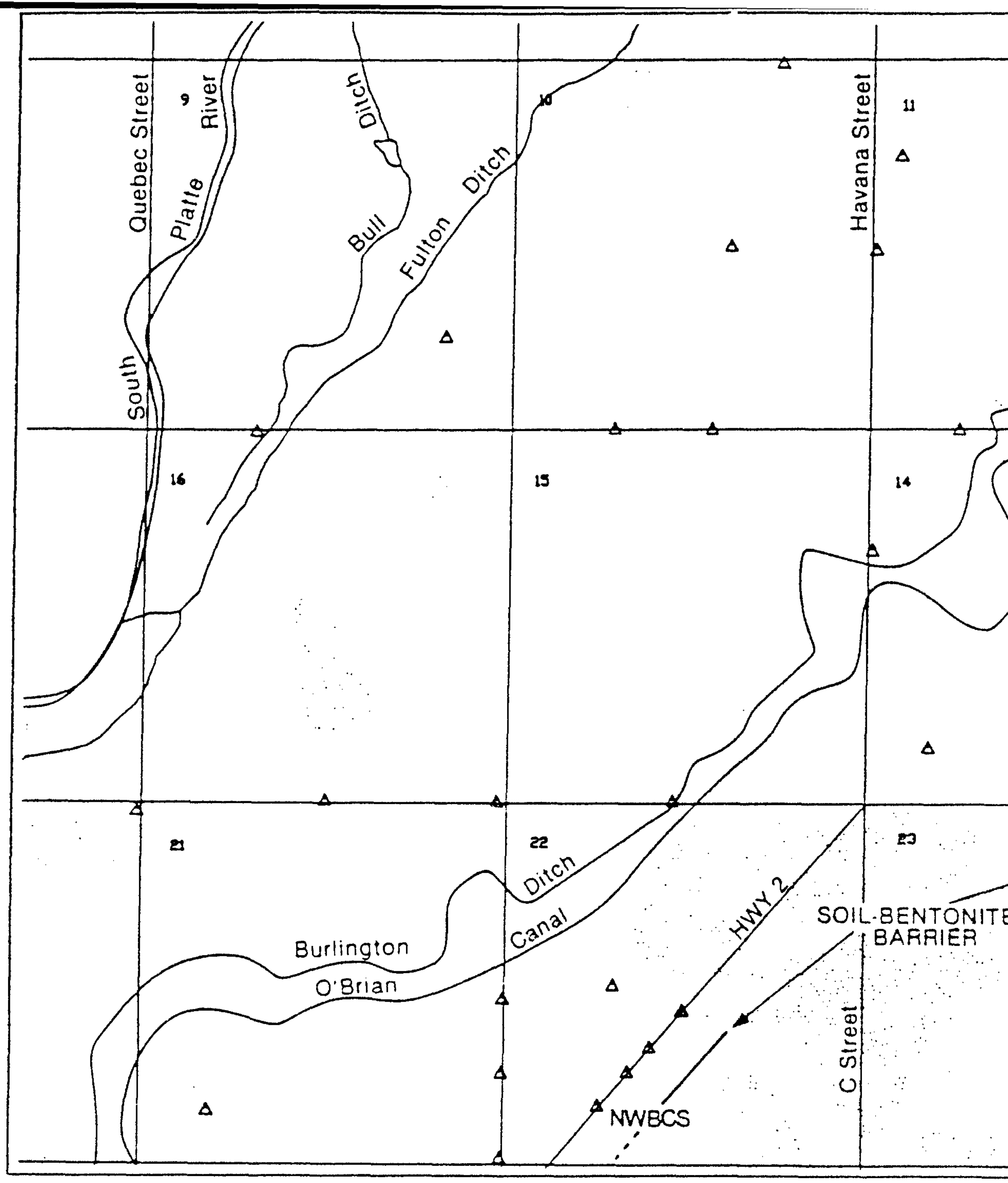
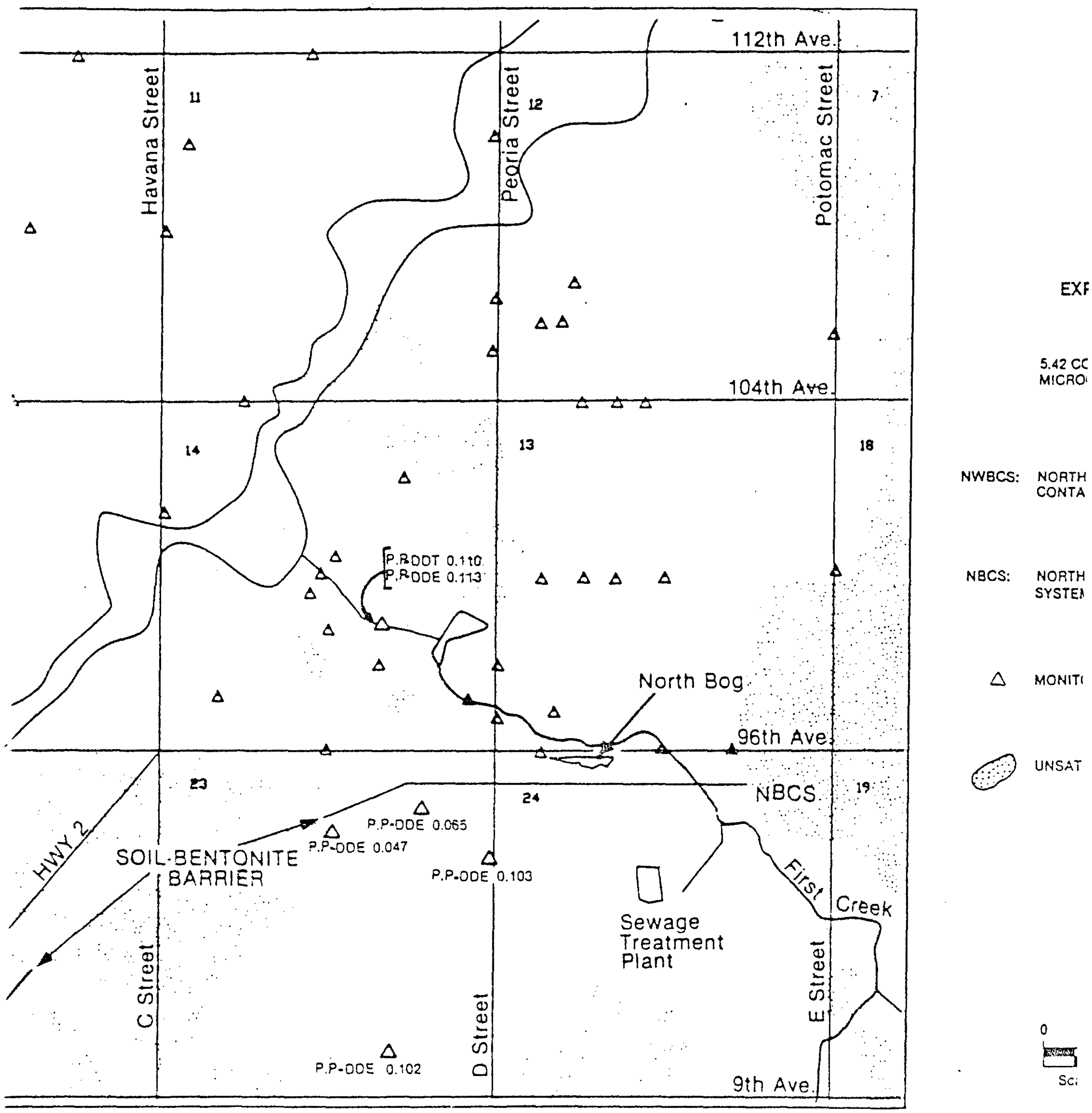


Figure F-21
ORGANOCHLORINE PESTICIDES (P,P-DDE, P,P-DDT, ALDRIN, ISODRIN) CONCENTRATI(
ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



"I, ISODRIN) CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS,

Prepared for:
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For Rocky Mounta

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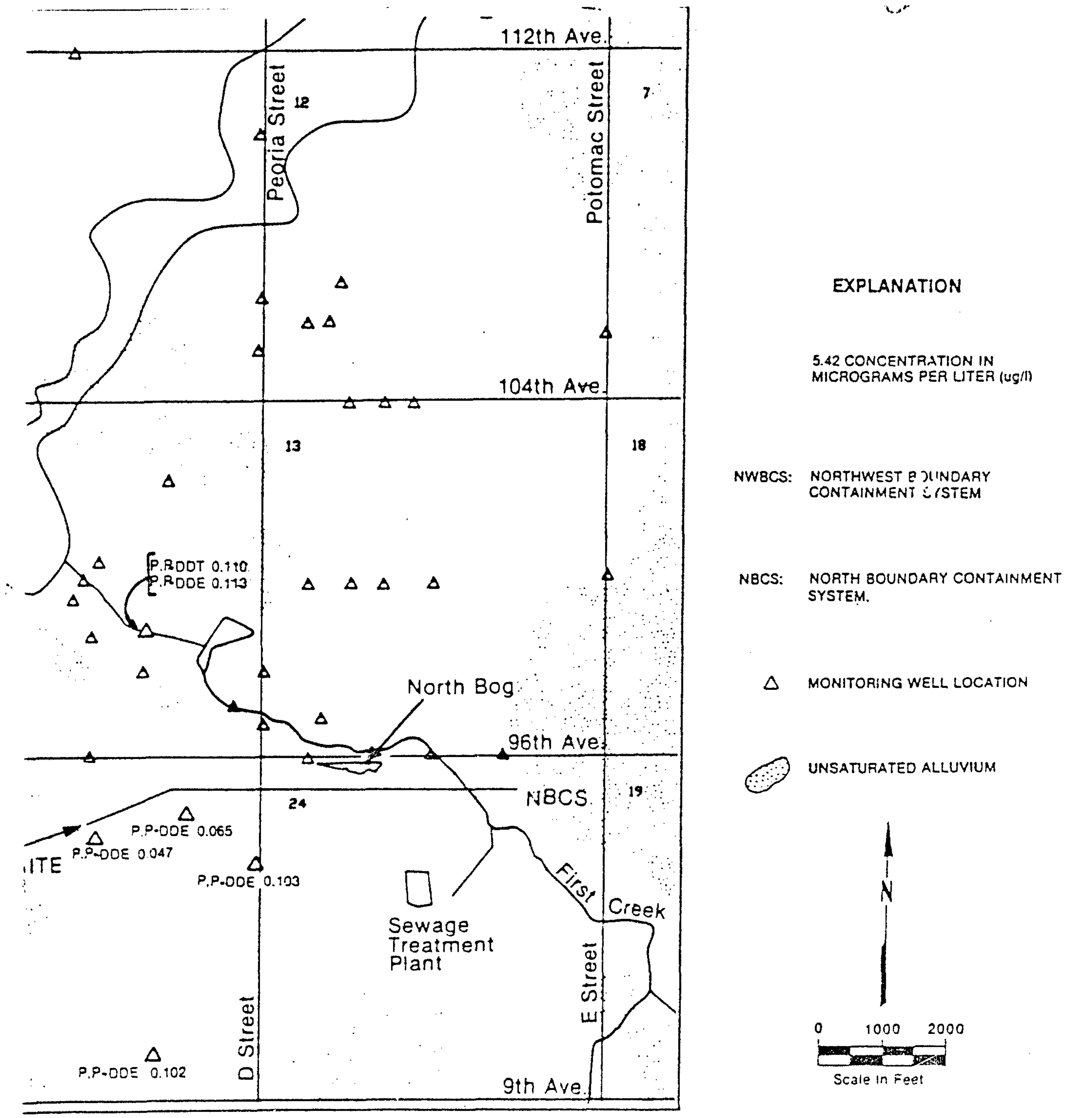


ATIONS EXCEEDING CERTIFIED REPORTING LIMITS,

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

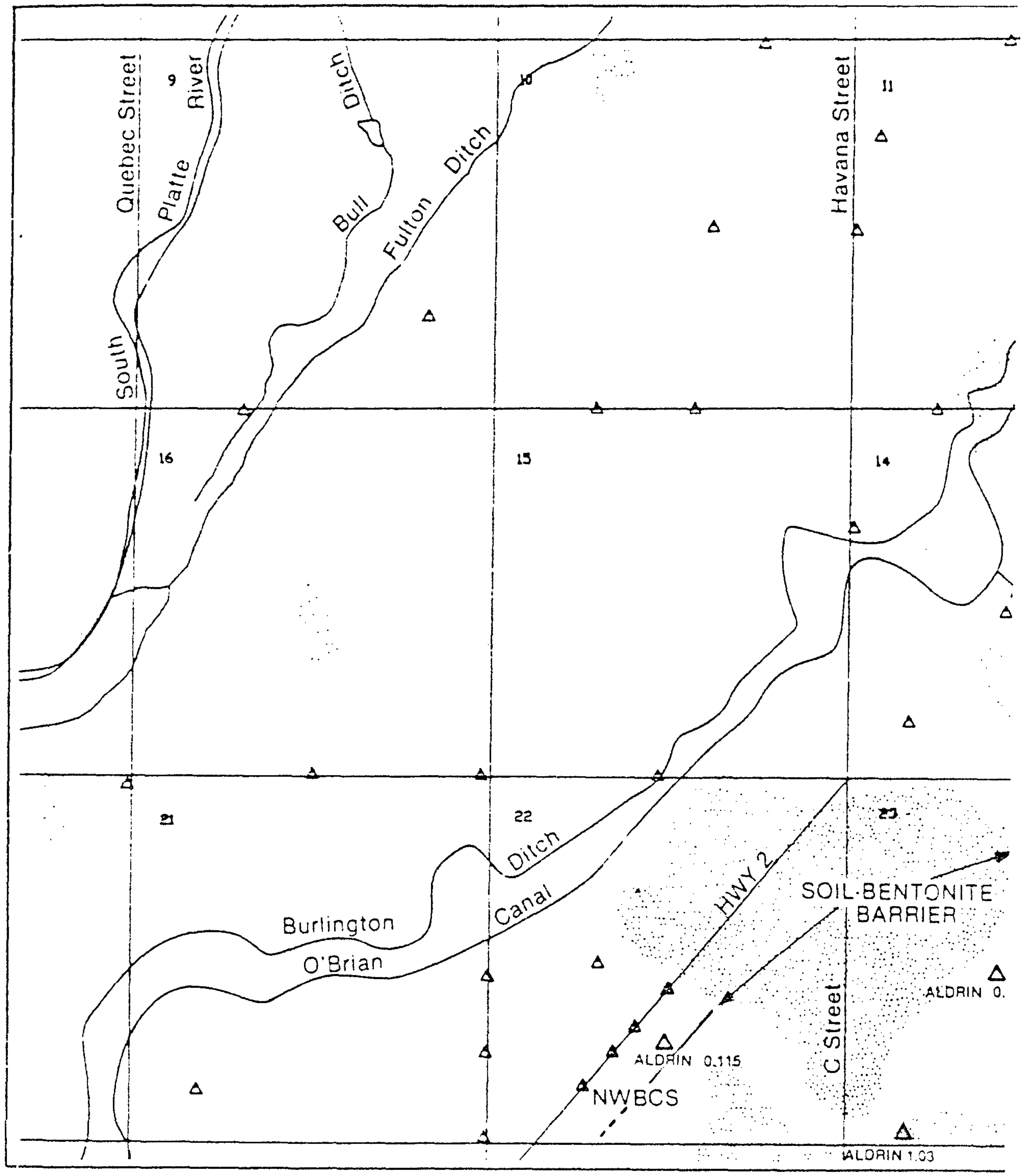
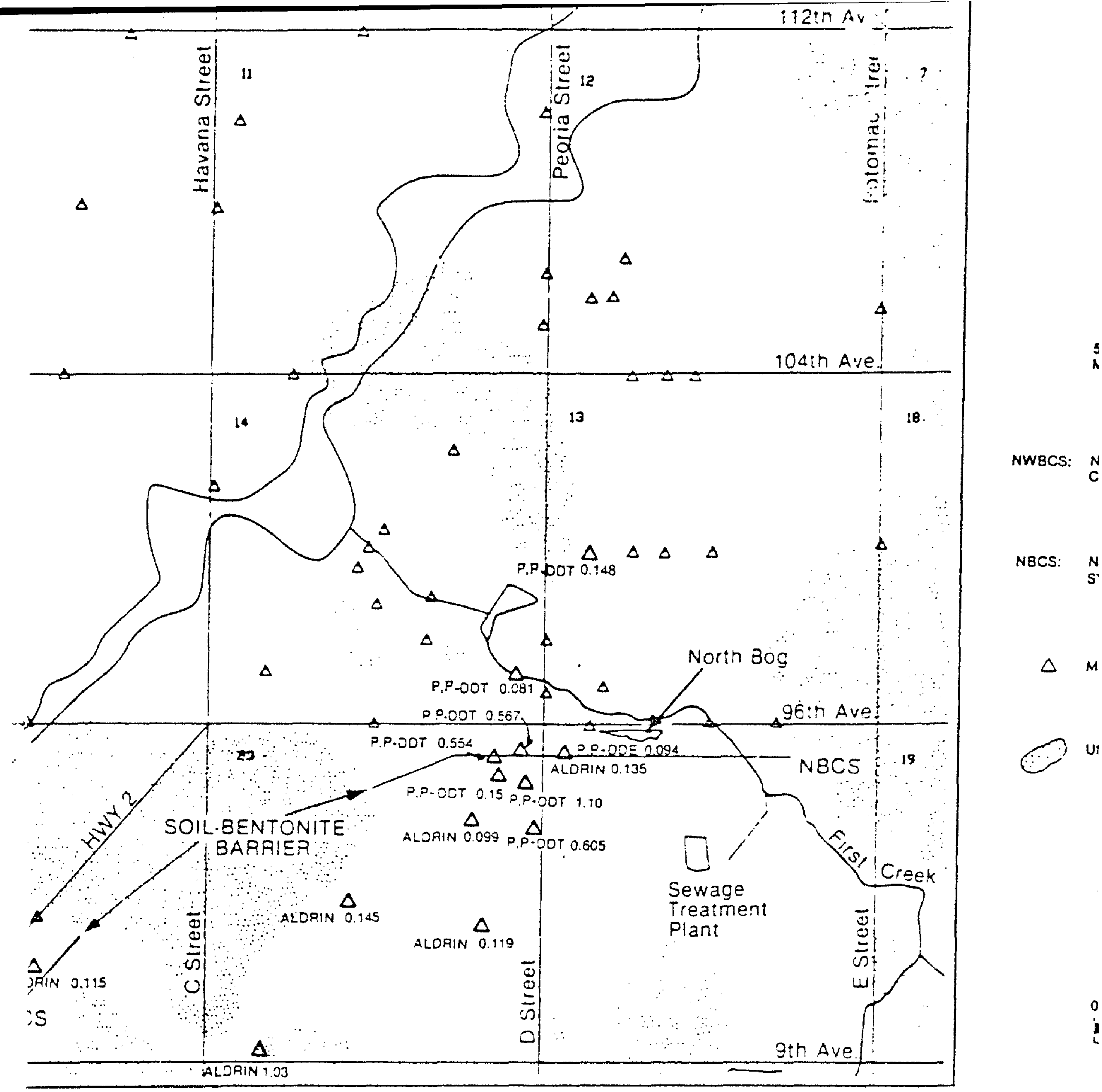


Figure F-22

ORGANOCHLORINE PESTICIDES (P,P-DDE, P,P-DDT, ALDRIN, ISODRIN) CONCENTRATIC ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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Prepared for:
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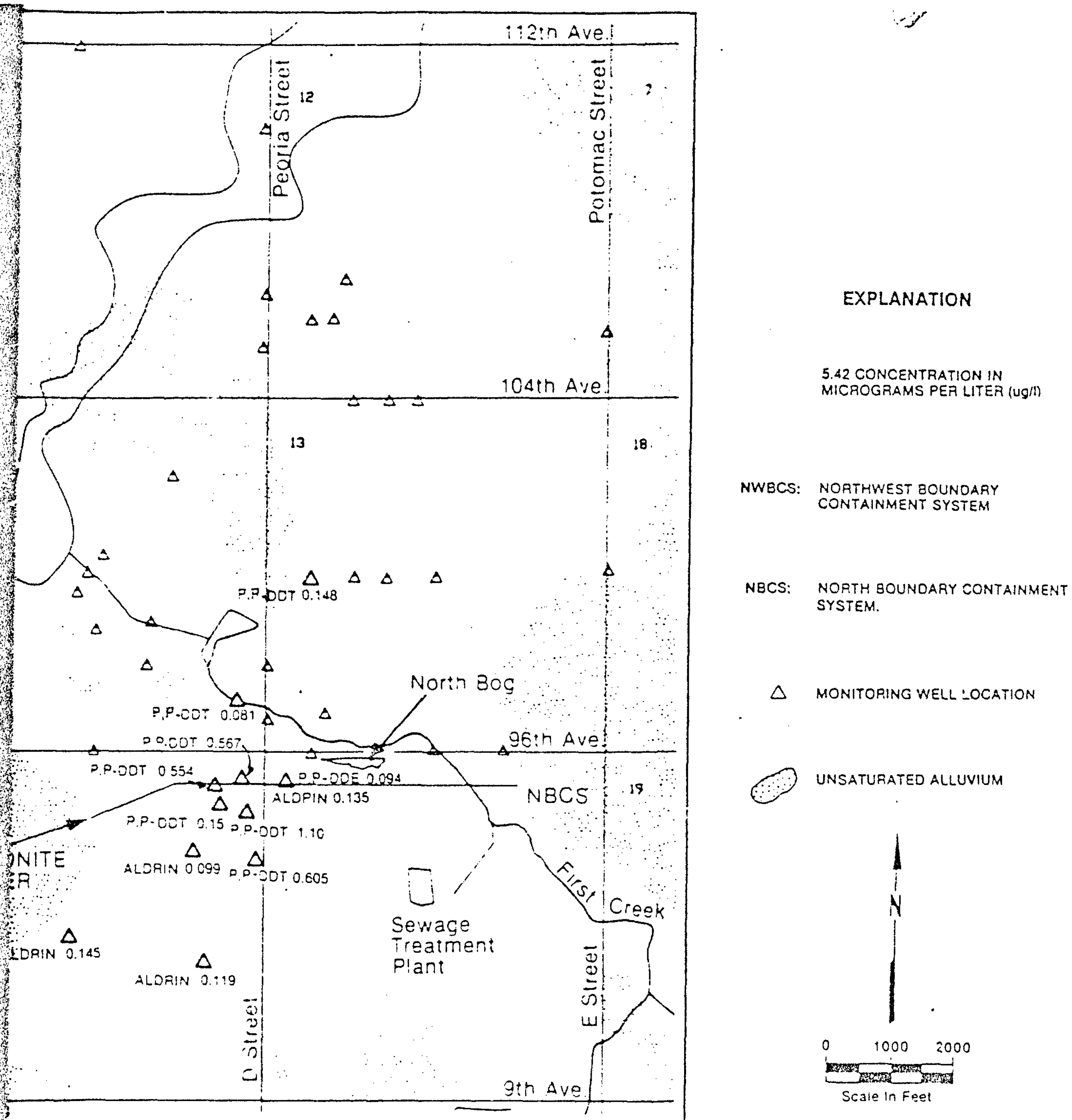

TRATIONS EXCEEDING CERTIFIED REPORTING LIMITS,

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U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

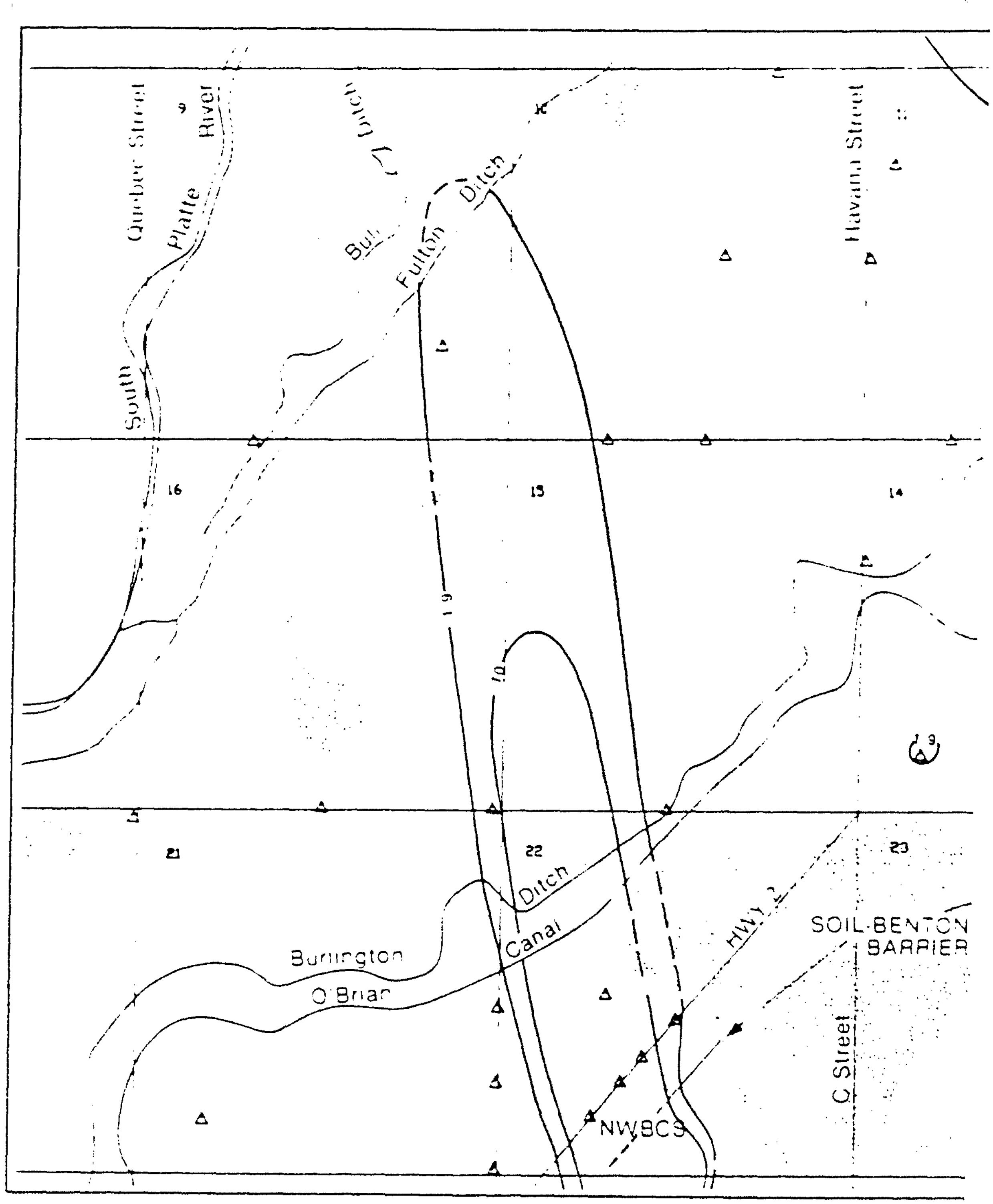
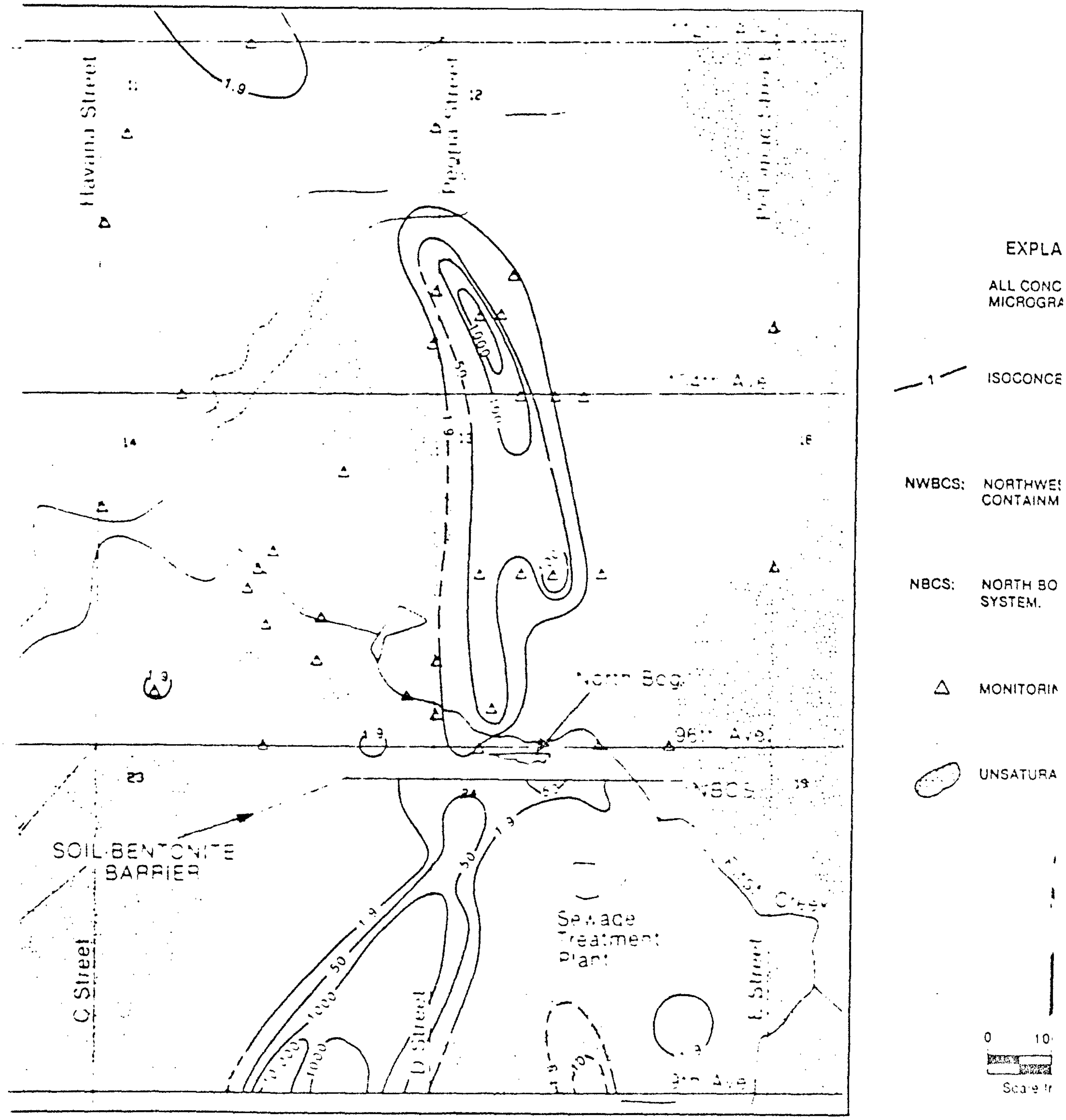


Figure F-23
CHLOROFORM CONCENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



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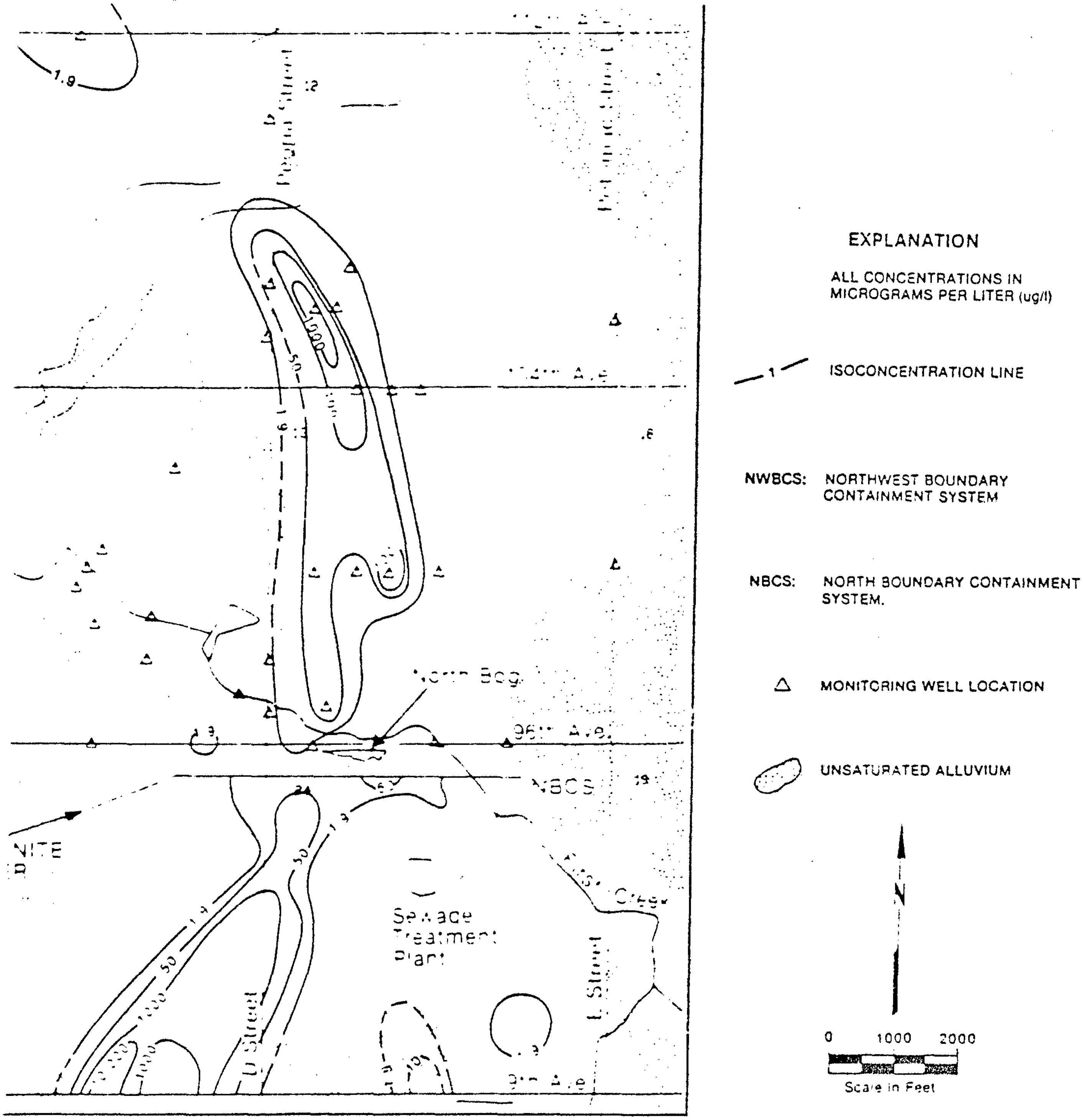
For Rocky Mountain

Aberdeen Proving Ground, M



Prepared for:
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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

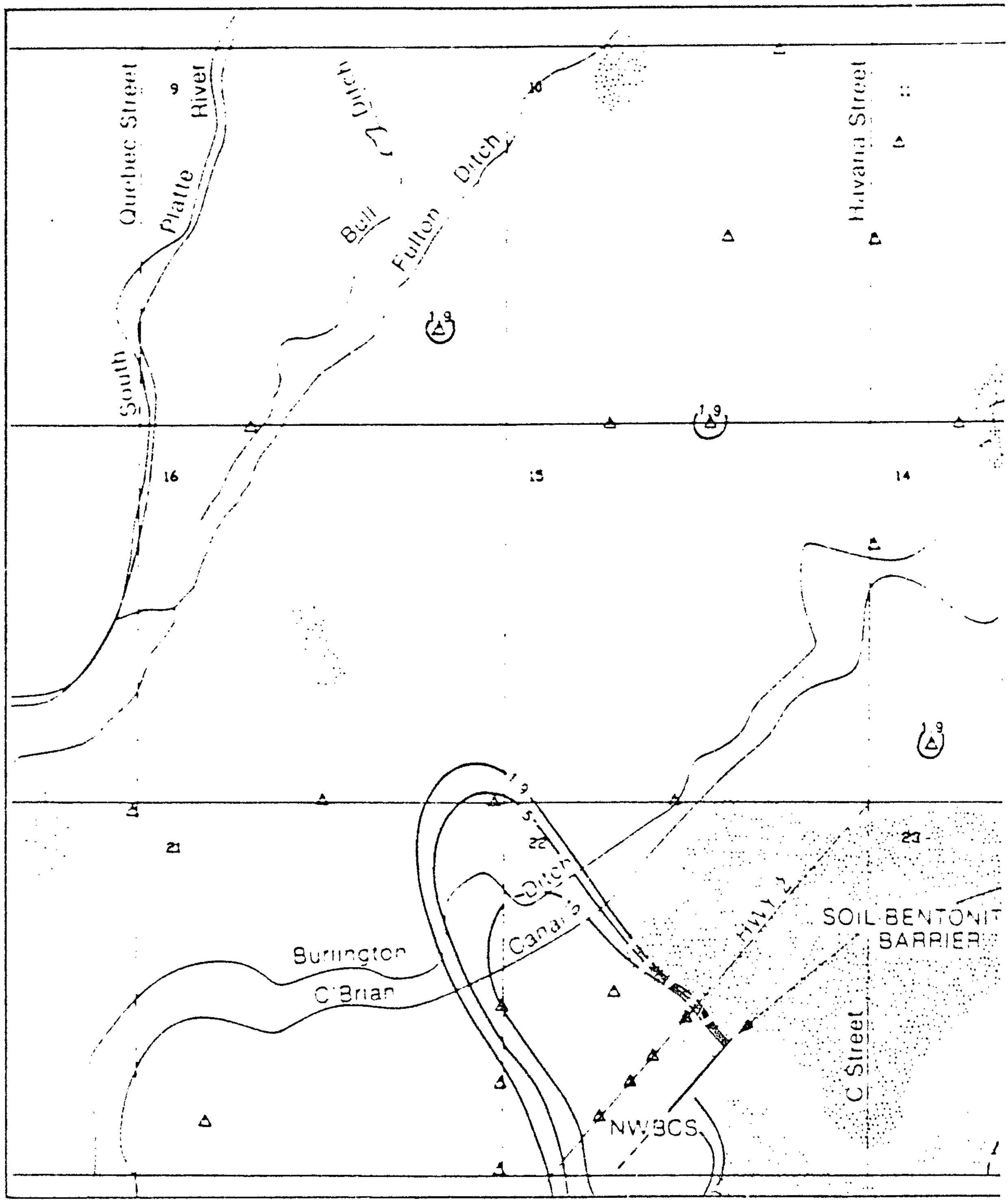
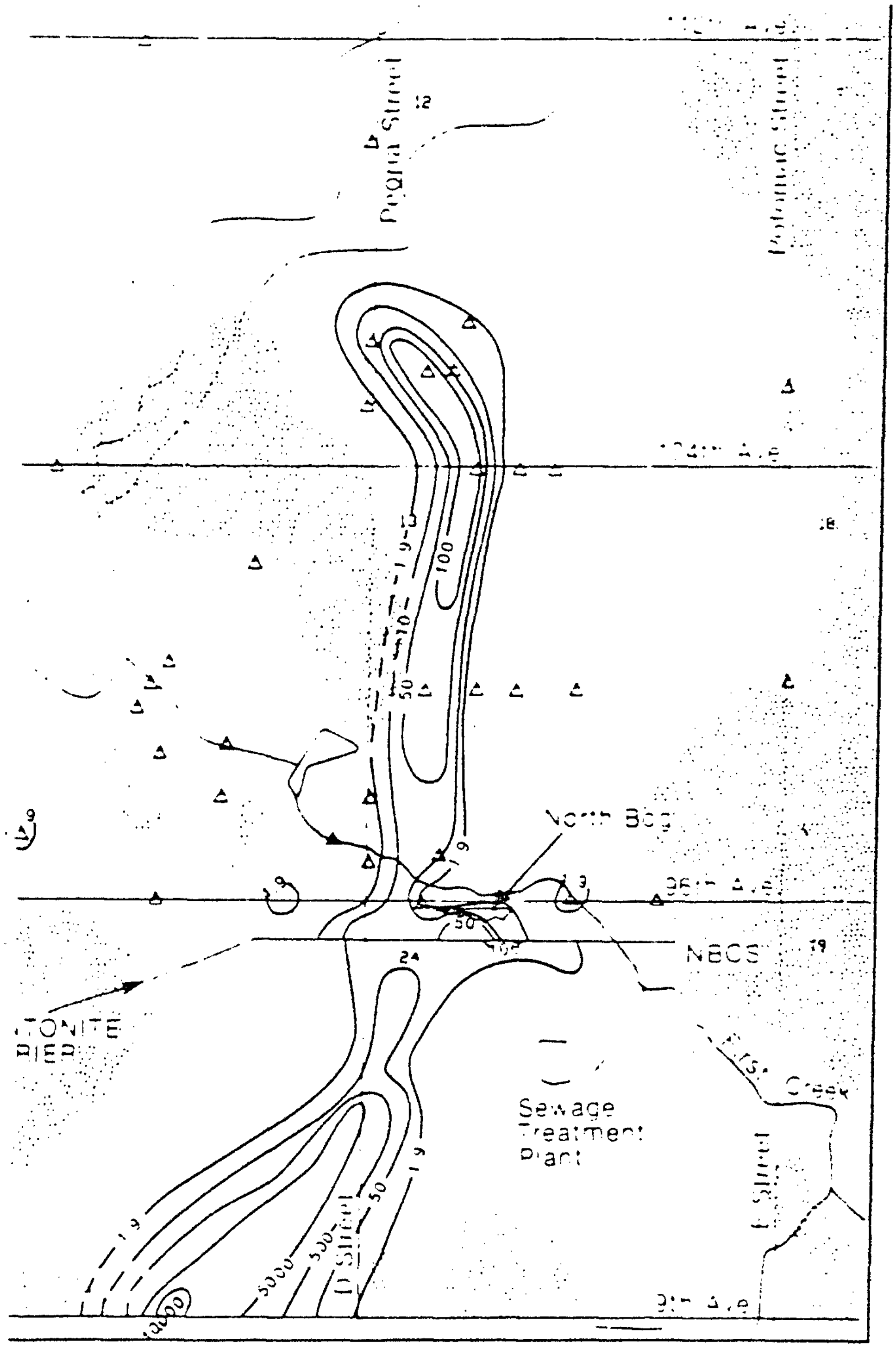


Figure F-24
CHLOROFORM CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE, 1988



EXPLANATION

ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l)

ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINME SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale in Feet

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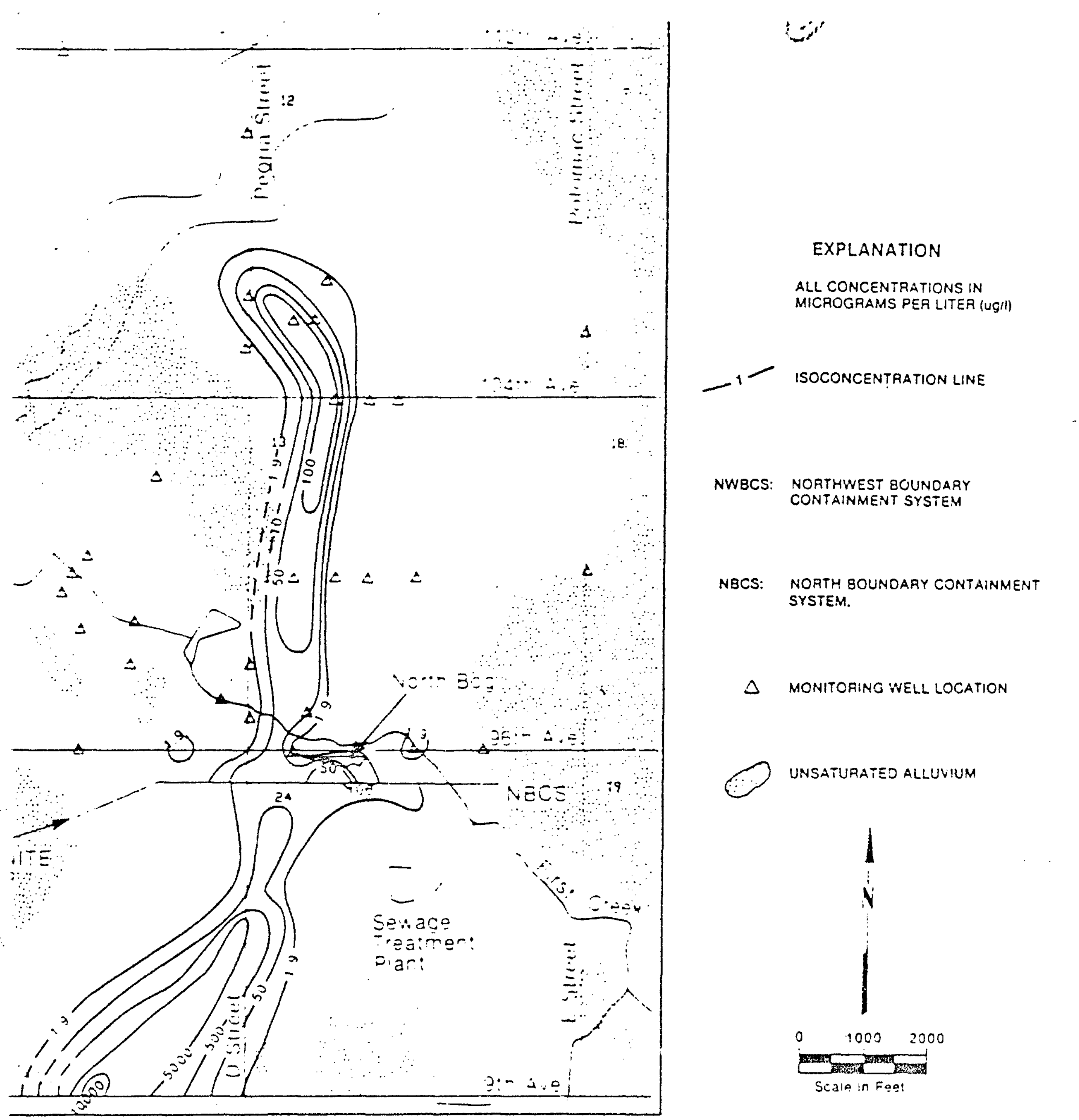
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



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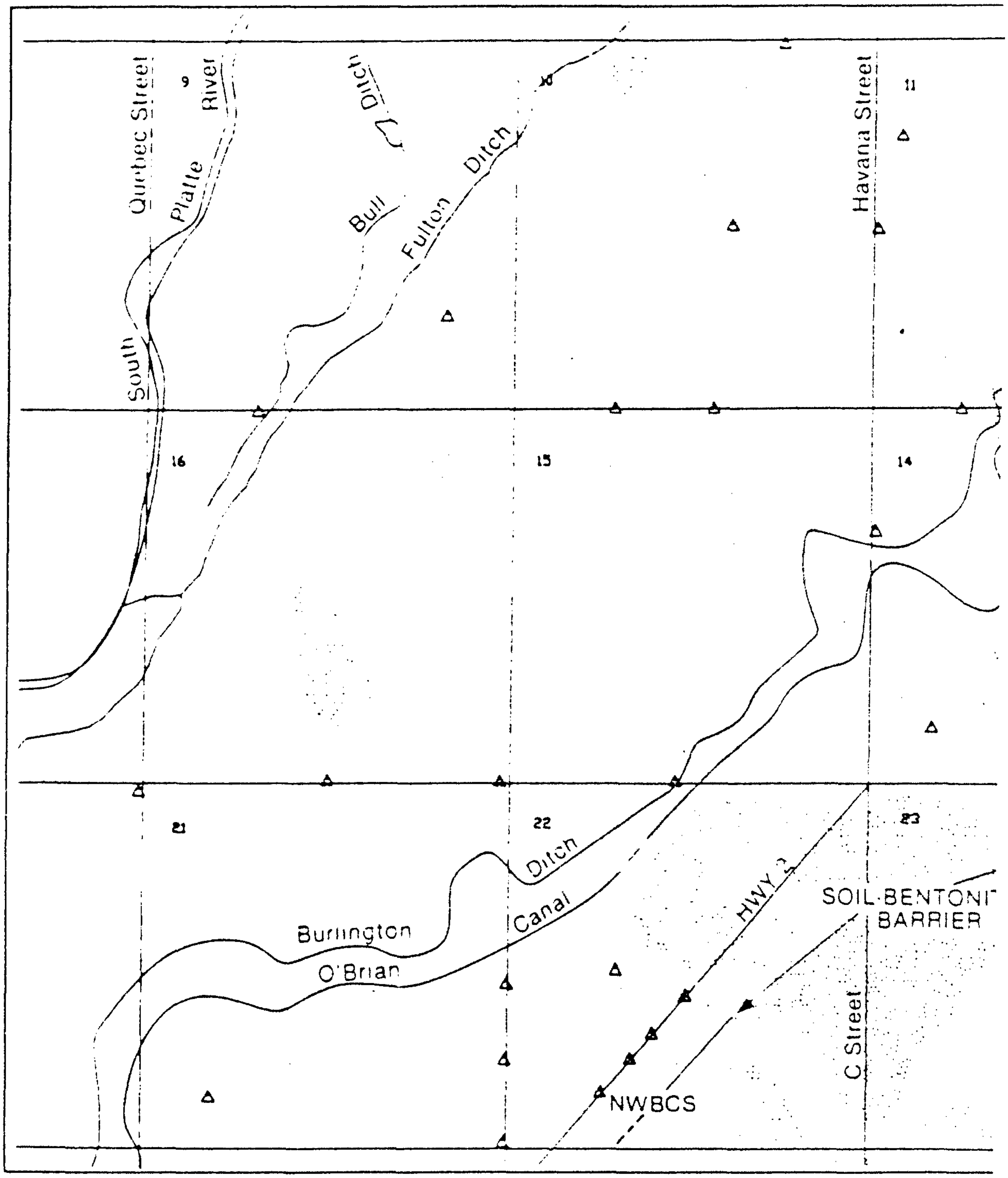
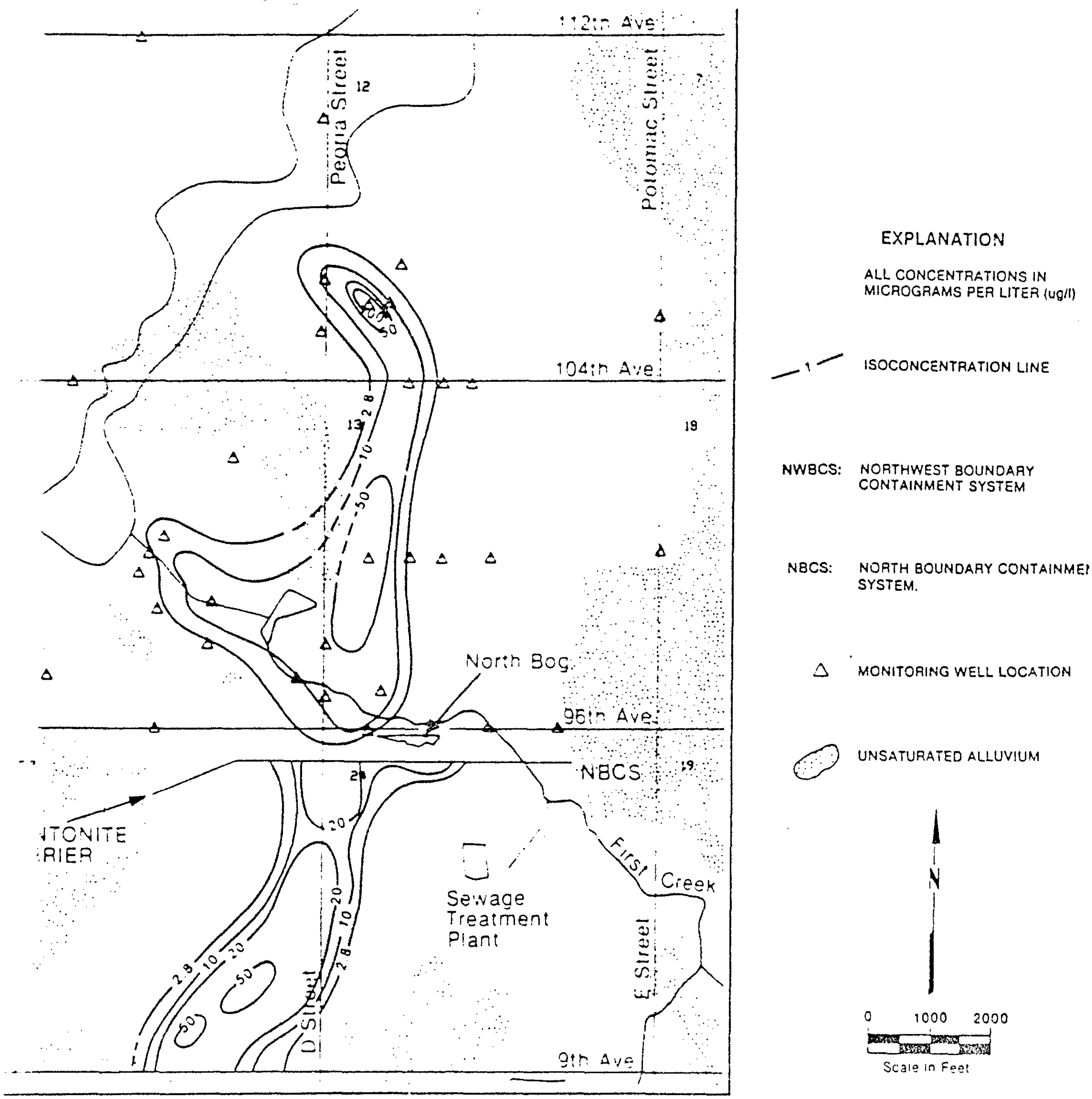


Figure F-25
TETRACHLOROETHENE CONCENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

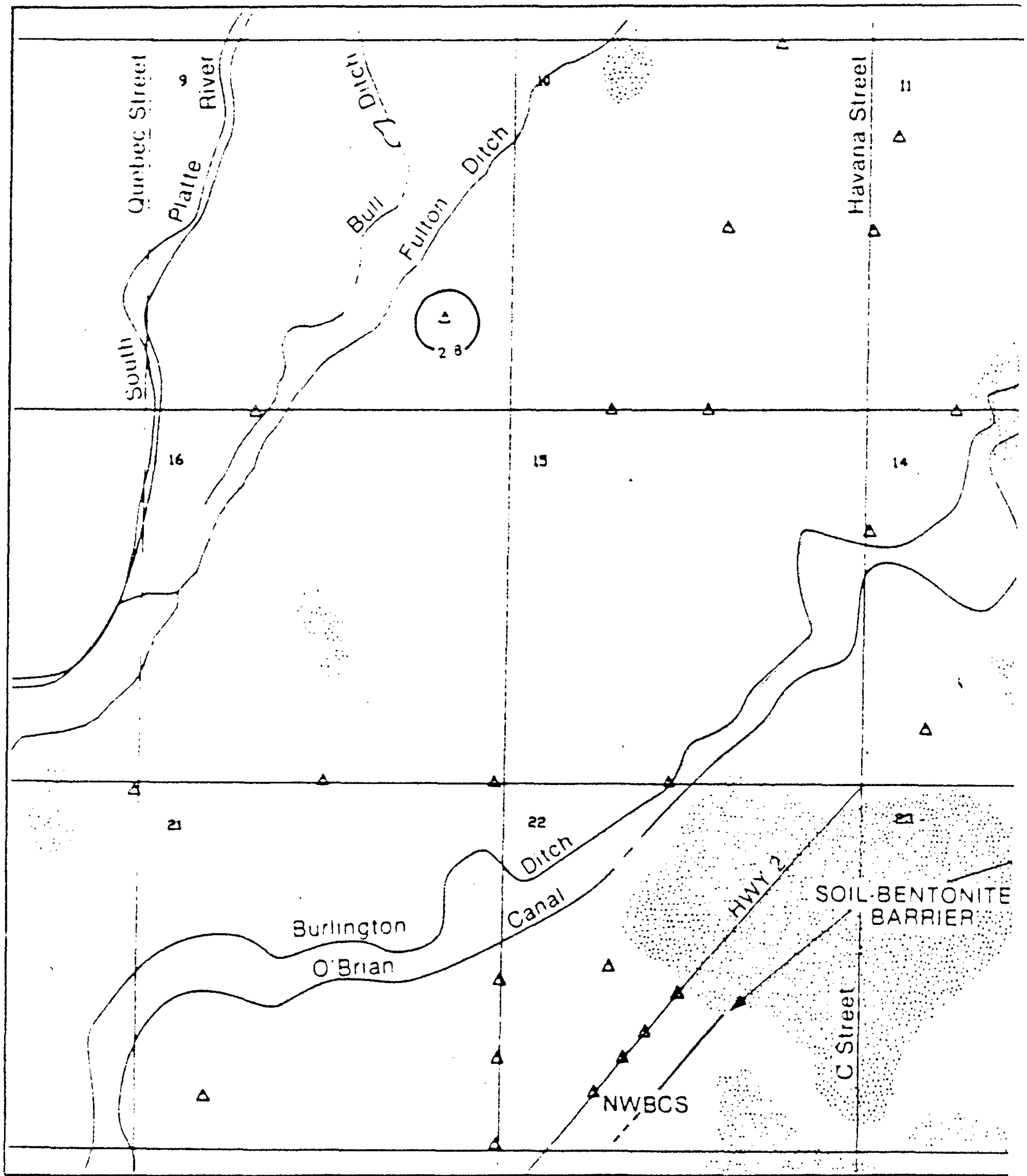
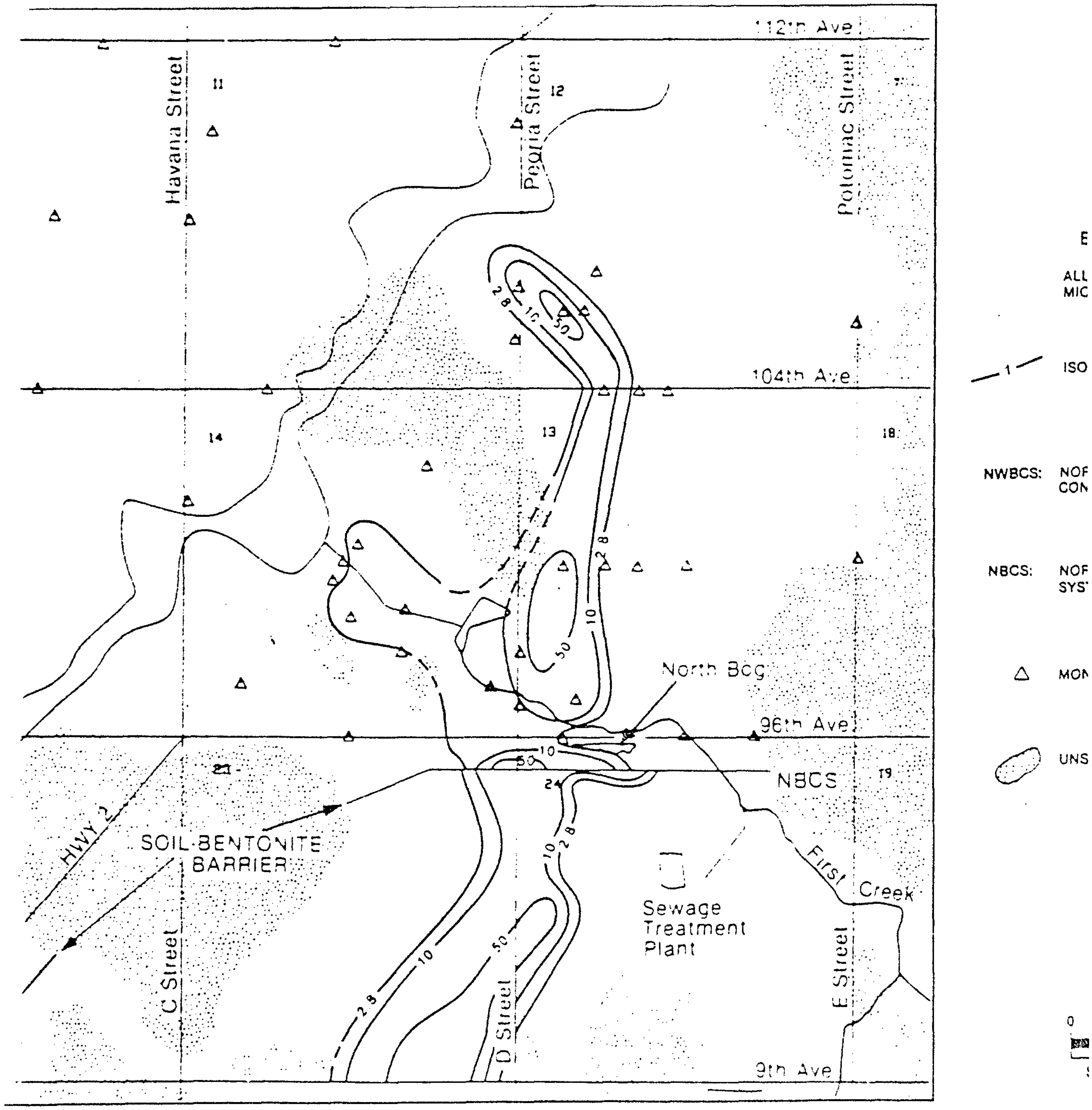


Figure F-26
TETRACHLOROETHENE CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE 1988

112th Ave



ug/l,

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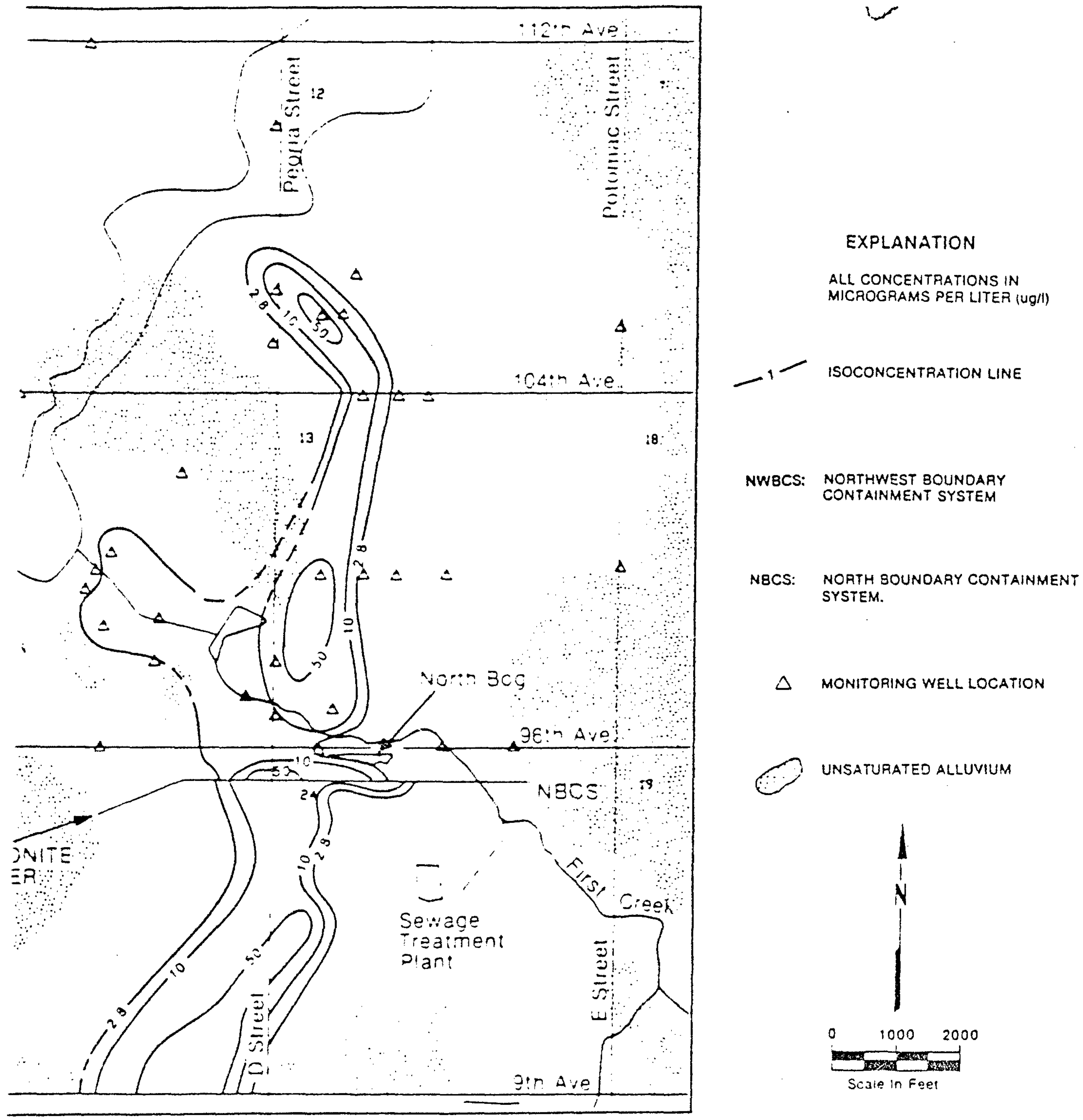
For Rocky Mount
Aberdeen Proving Grou



Prepared for:
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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

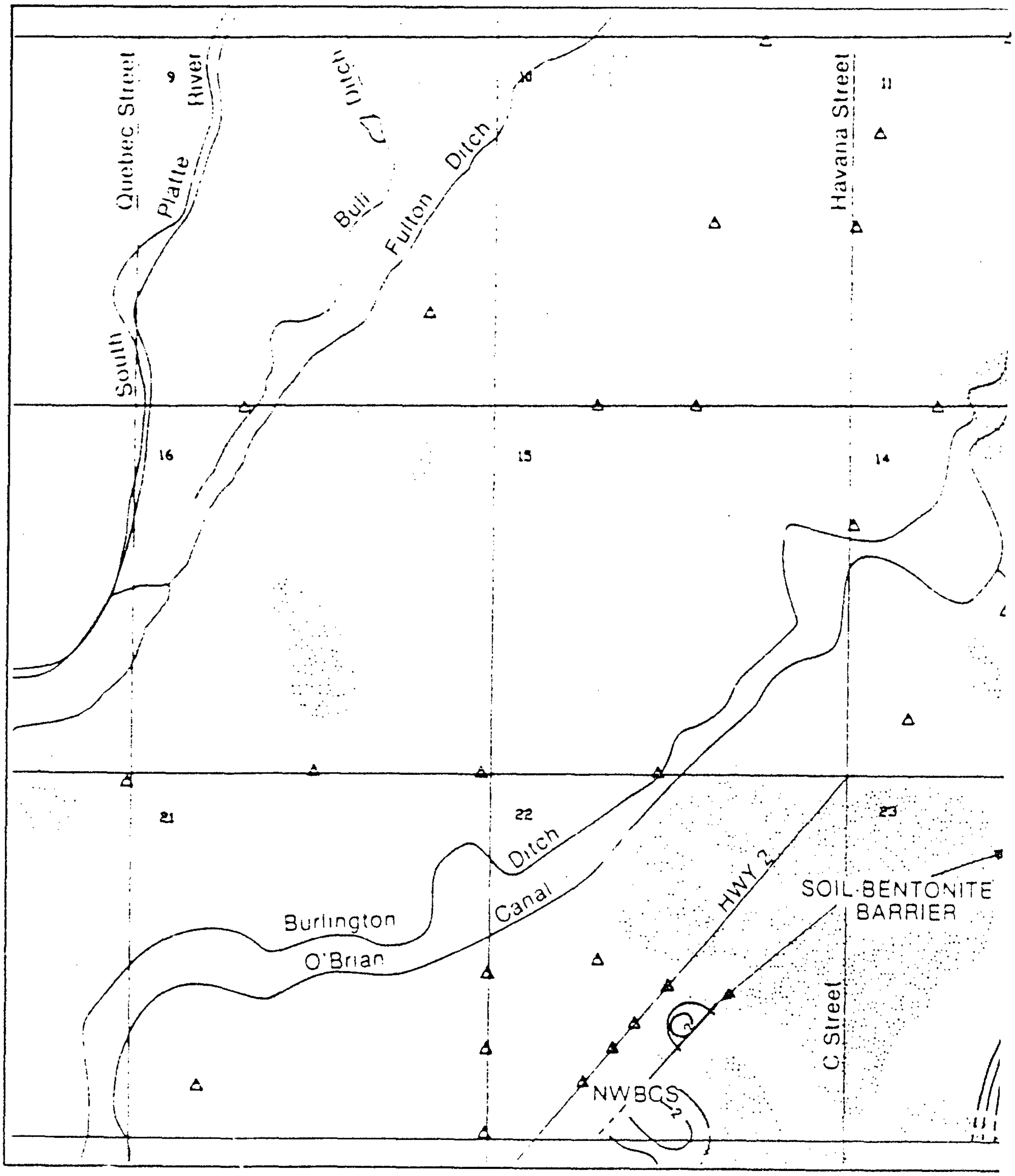
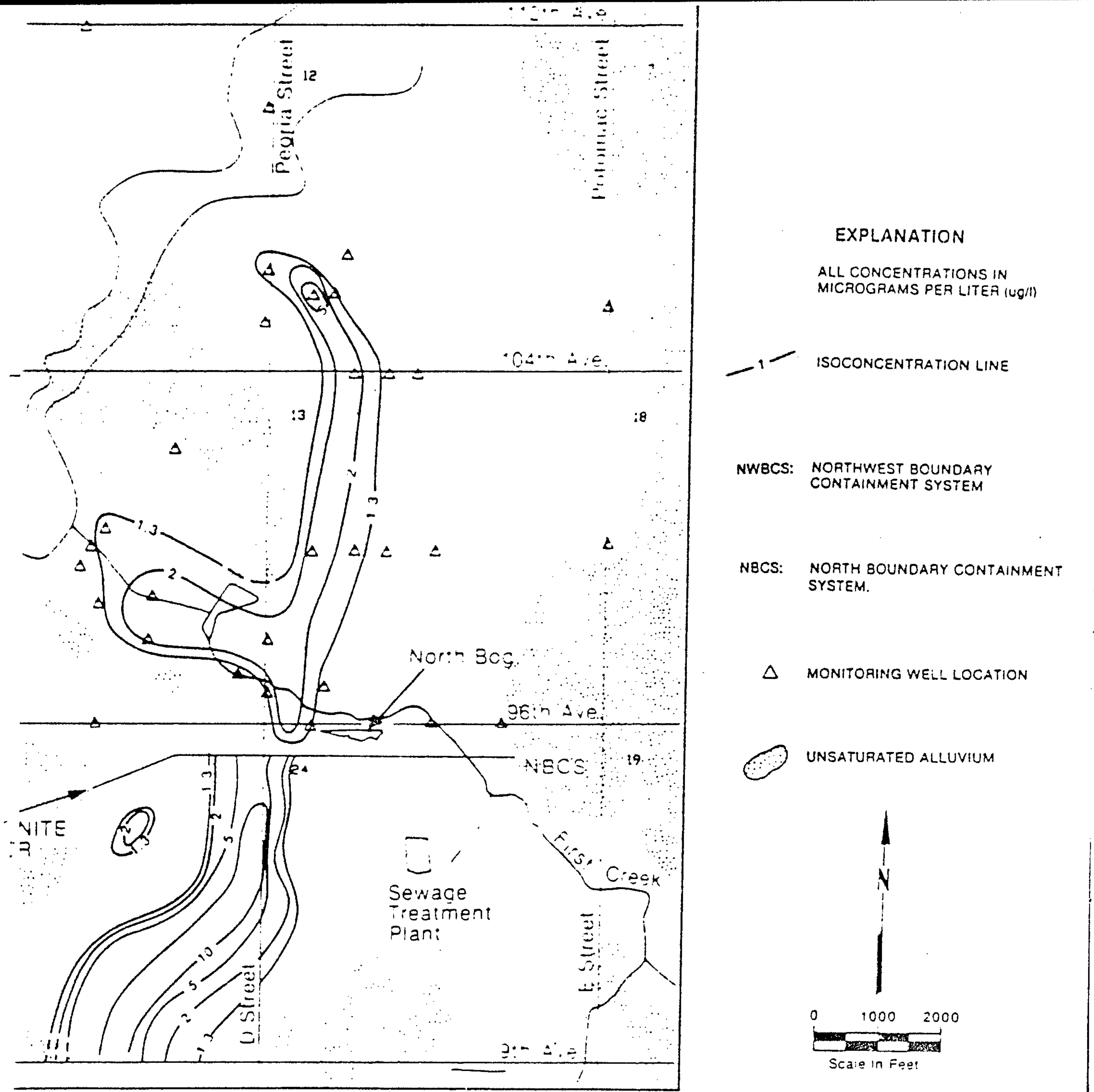


Figure F-27
TRICHLOROETHENE CONCENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE, 1988



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Aberdeen Proving Ground, Maryland

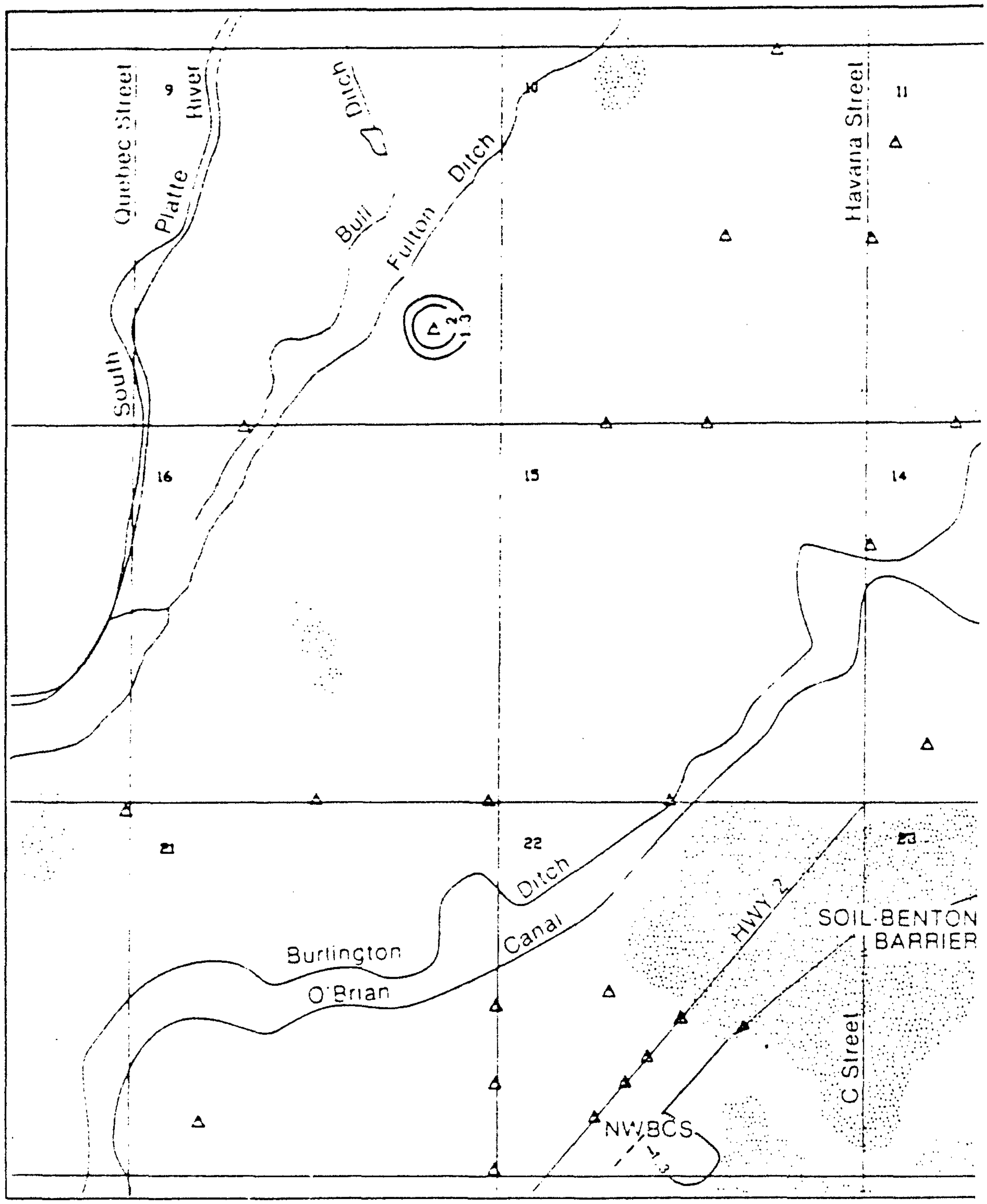
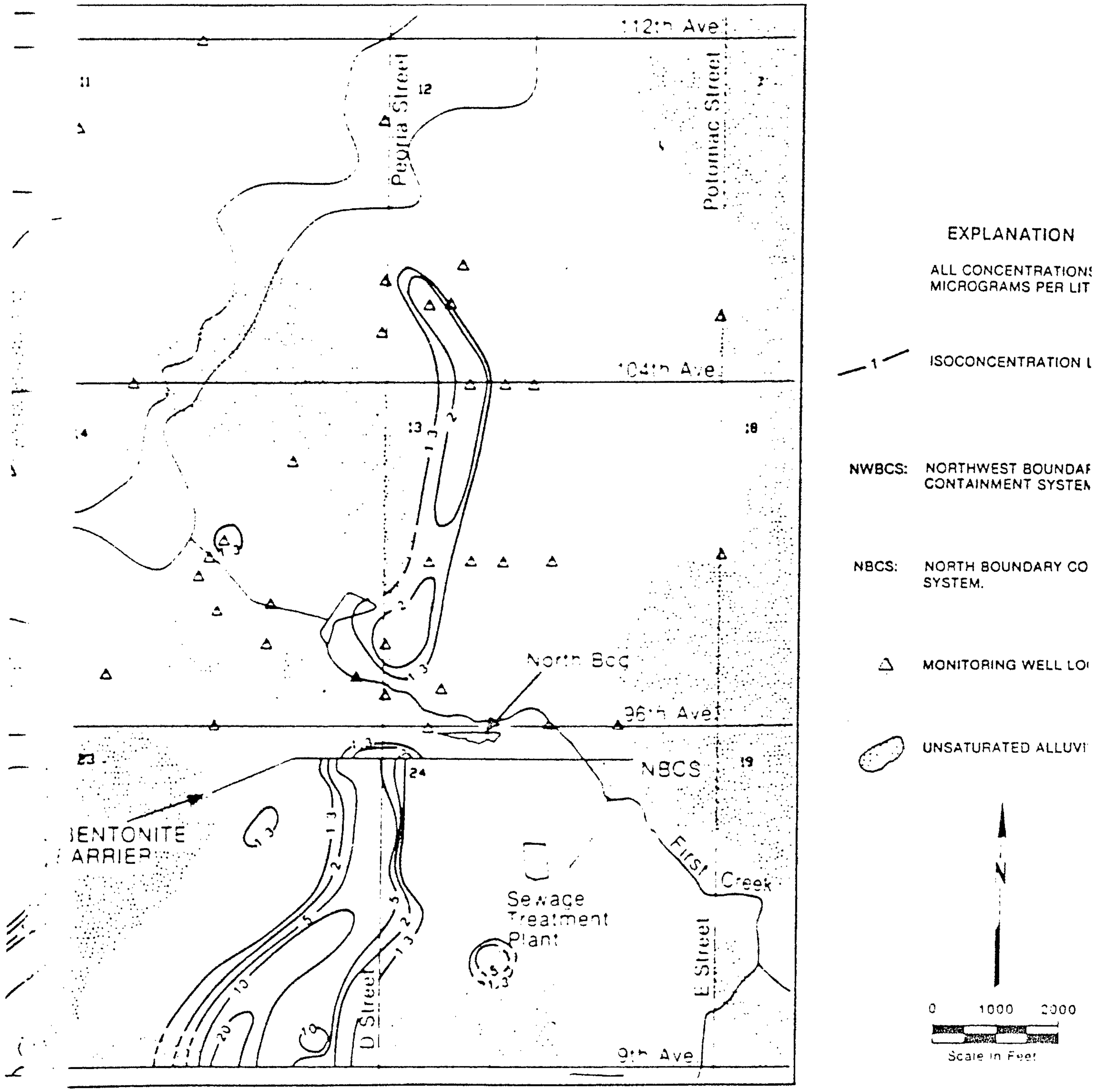


Figure F-28
TRICHLOROETHENE CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE, 1988



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For Rocky Mountain Arsena

Aberdeen Proving Ground, Maryland

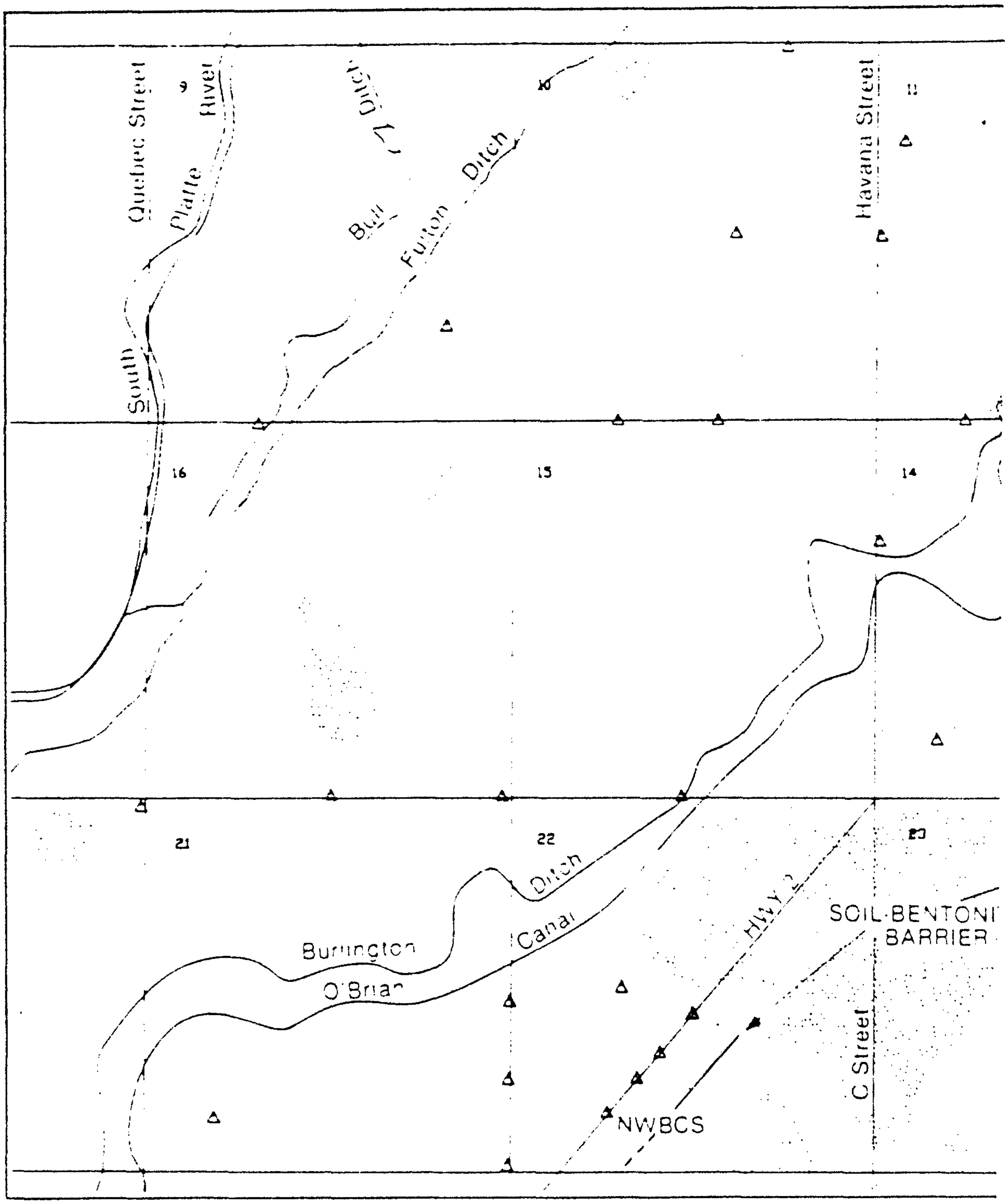
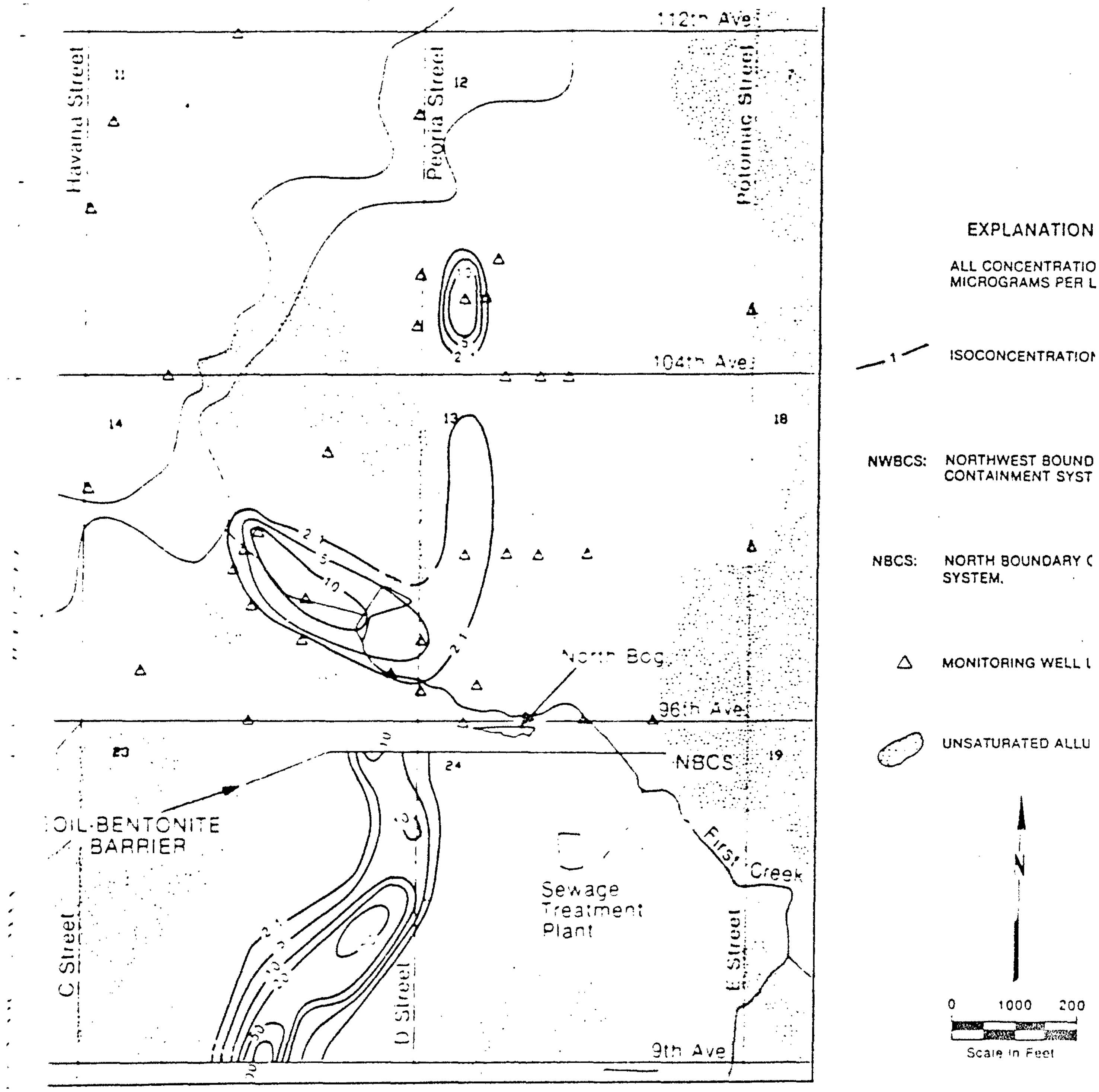


Figure F-29
1,2 DICHLOROETHANE CONCENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



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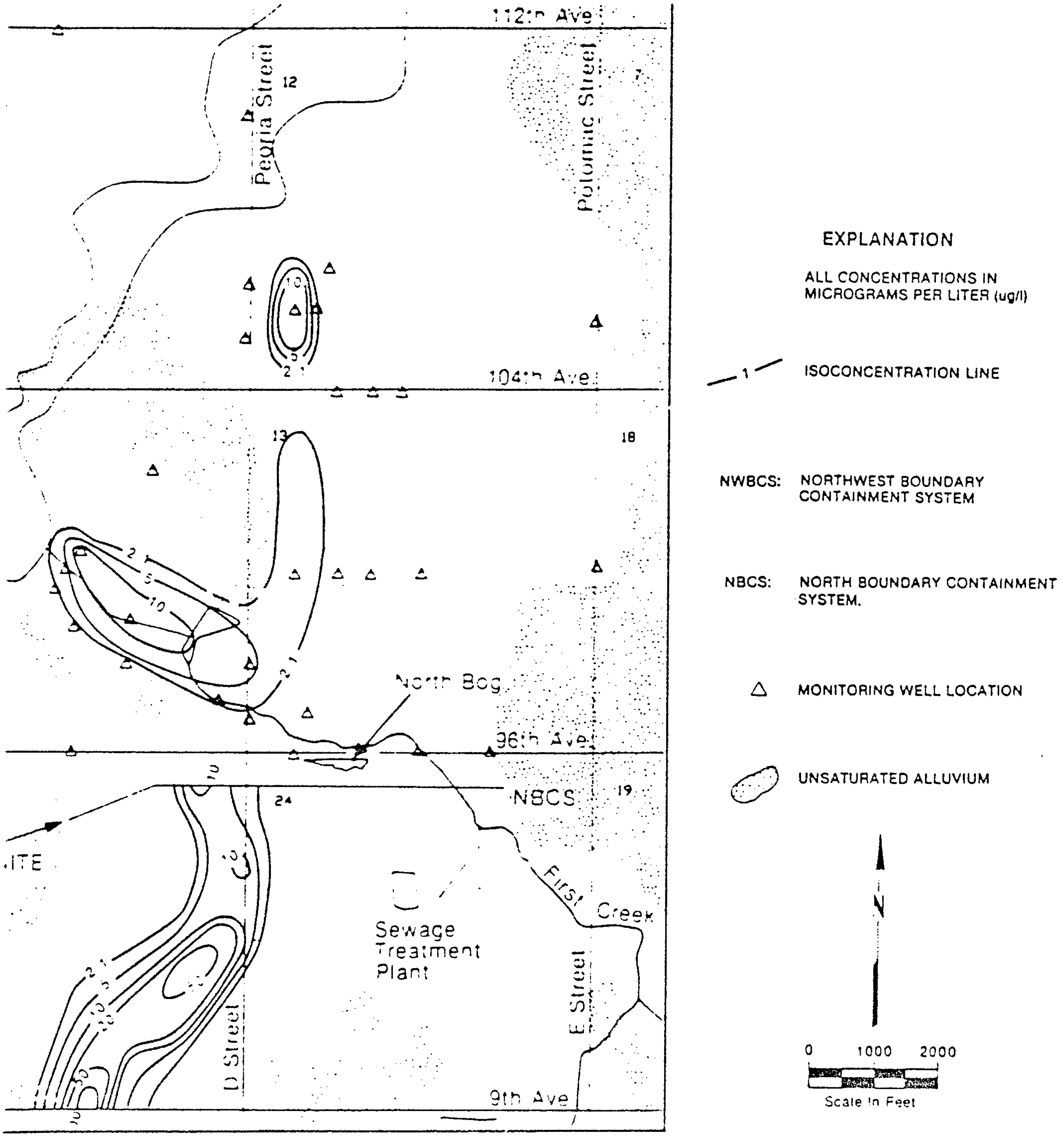
For Rocky Mountain Arser

Aberdeen Proving Ground, Maryland



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Aberdeen Proving Ground, Maryland

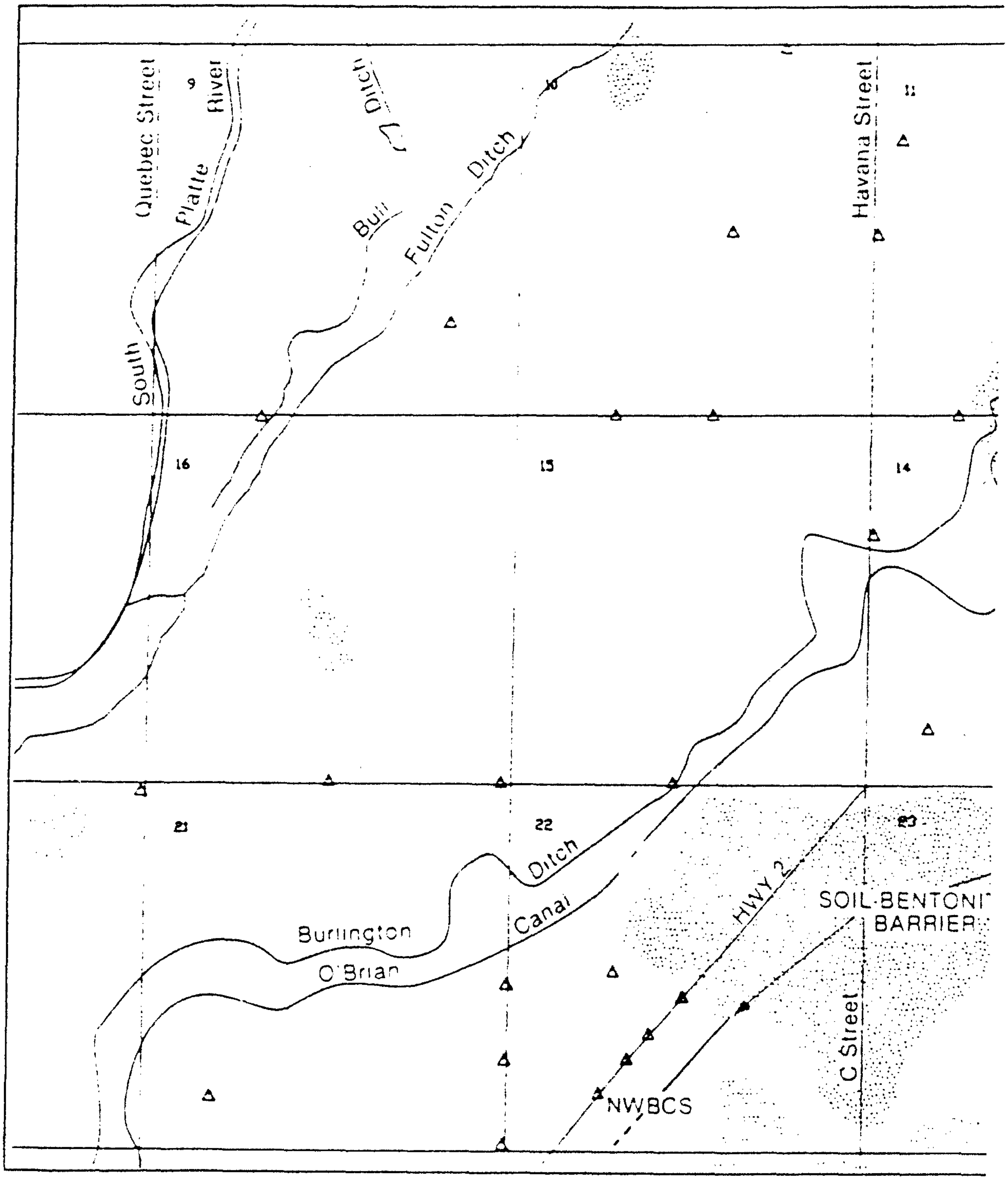
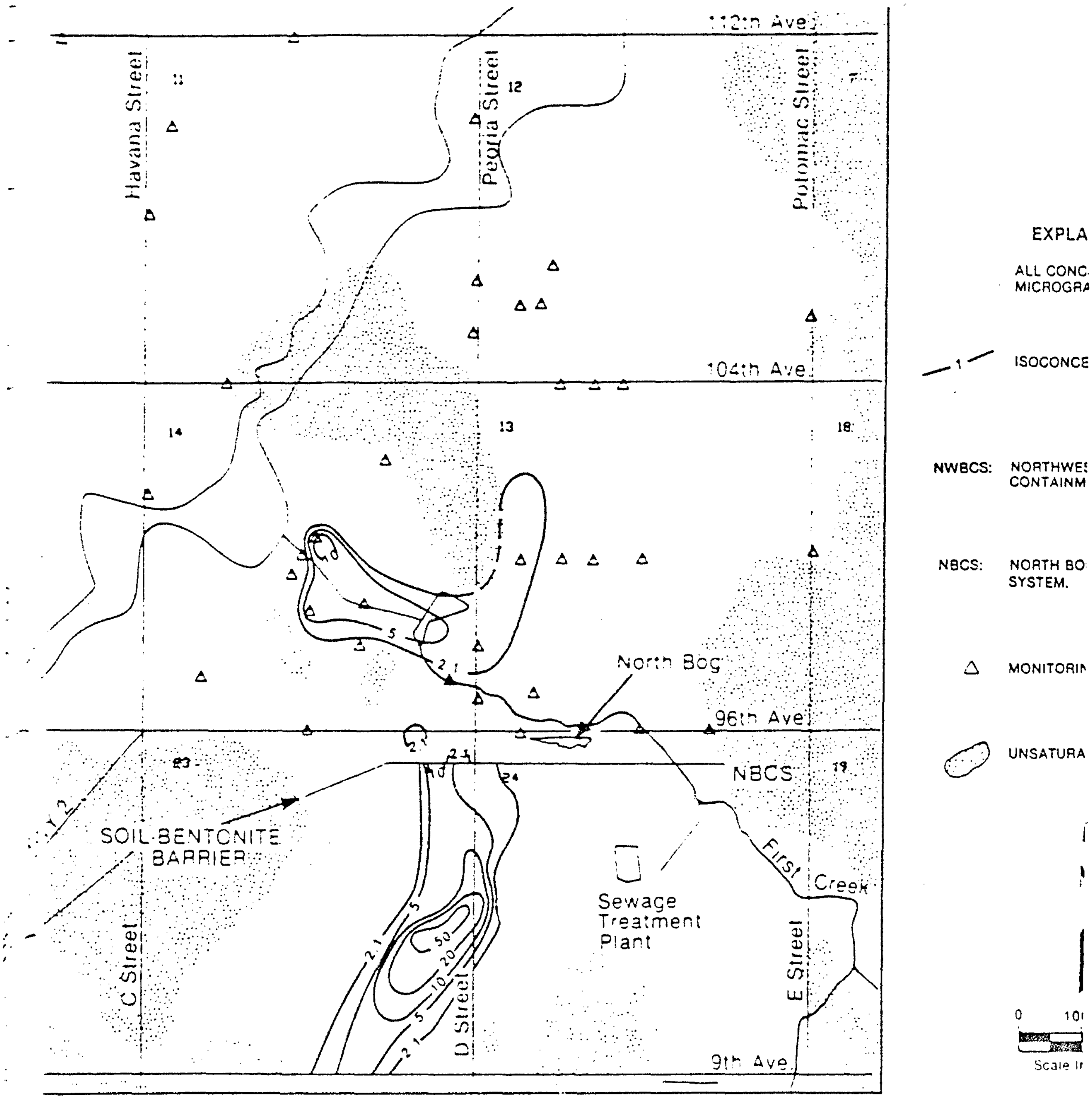


Figure F-30
1,2 DICHLOROETHANE CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



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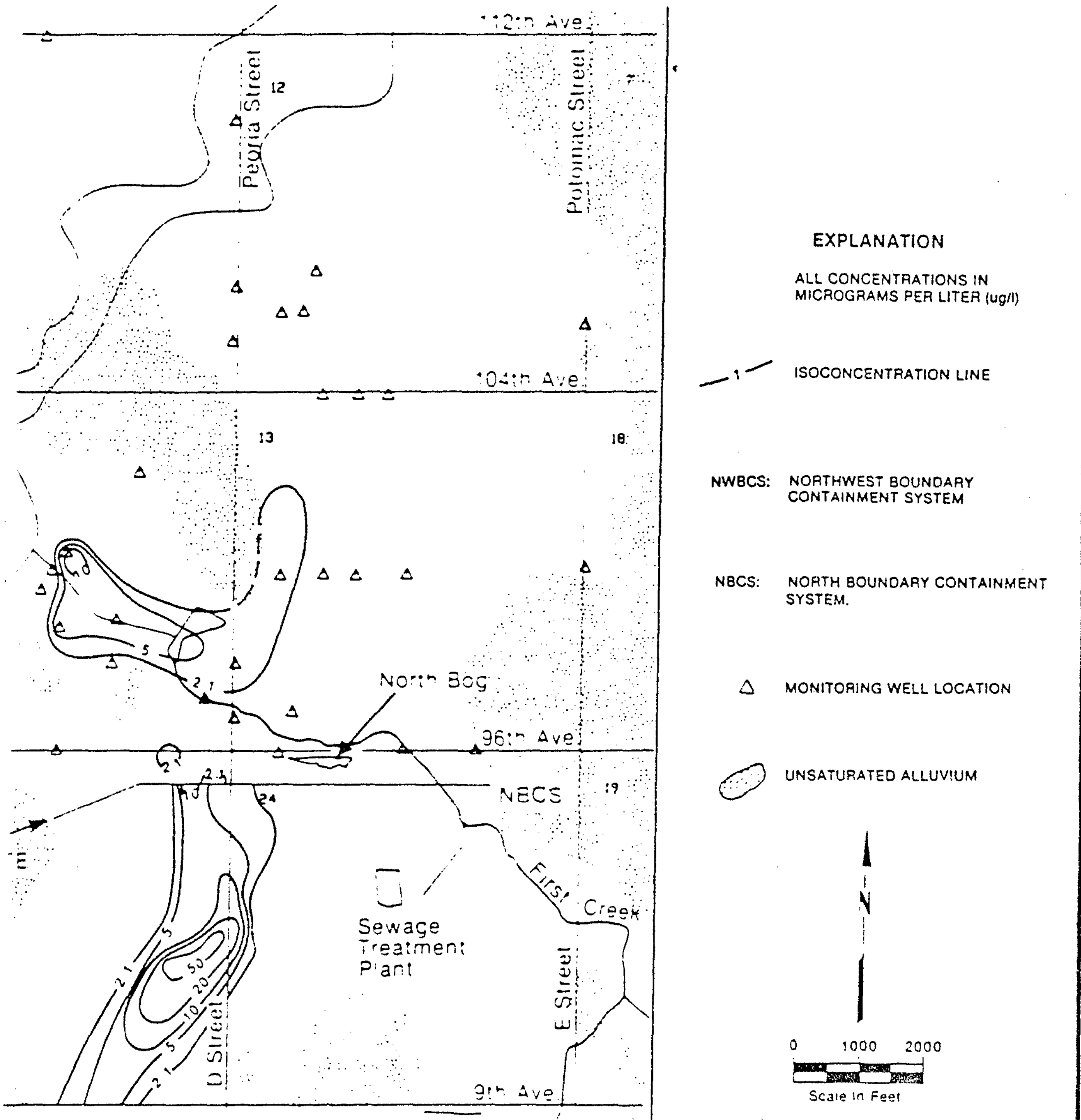
For Rocky Mountain

Aberdeen Proving Ground, M



Prepared for:
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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

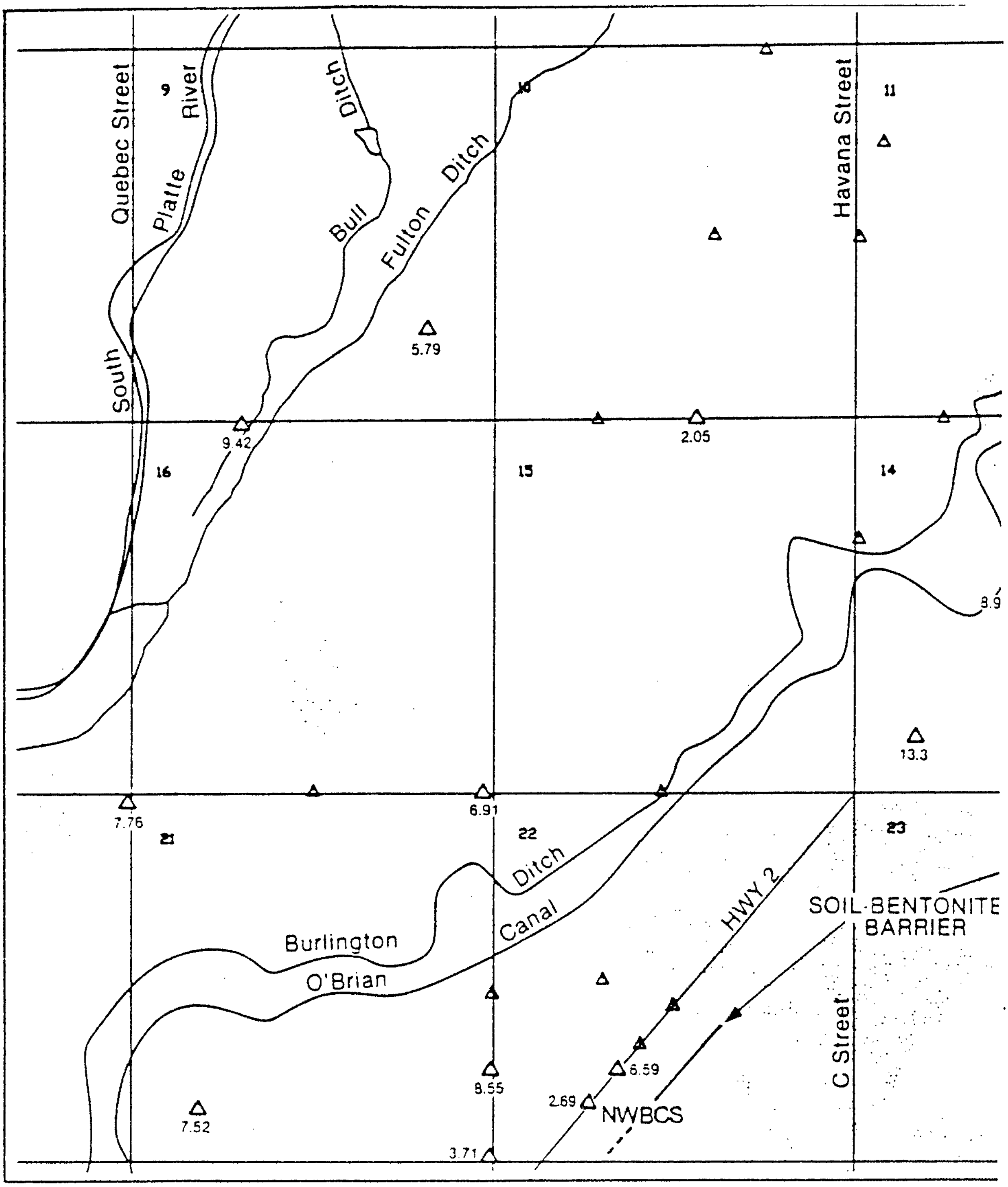
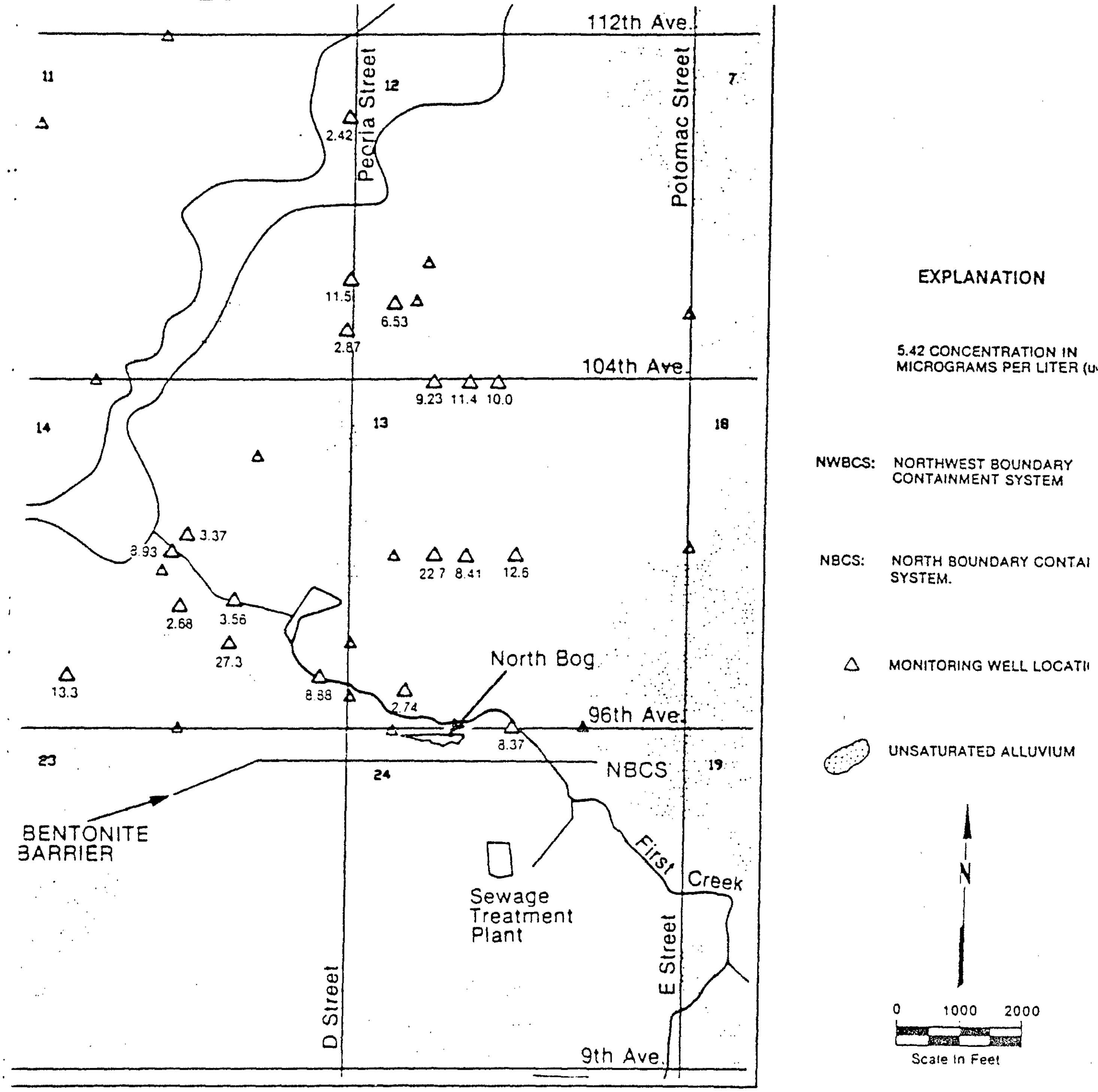


Figure F-31
CHLOROBENZENE CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, u(
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



G LIMITS, ug/l,

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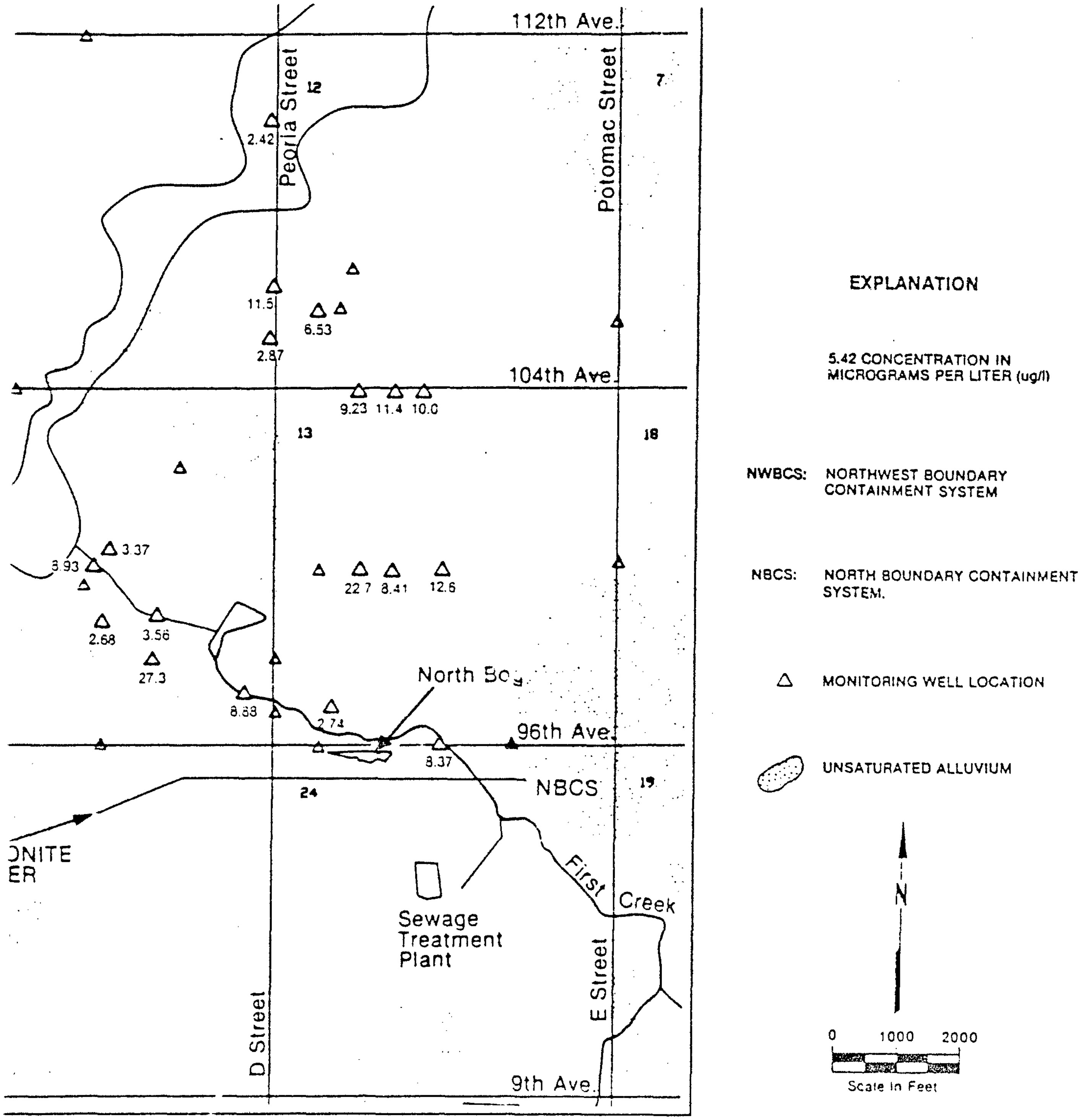
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



TS, ug/l,

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Aberdeen Proving Ground, Maryland

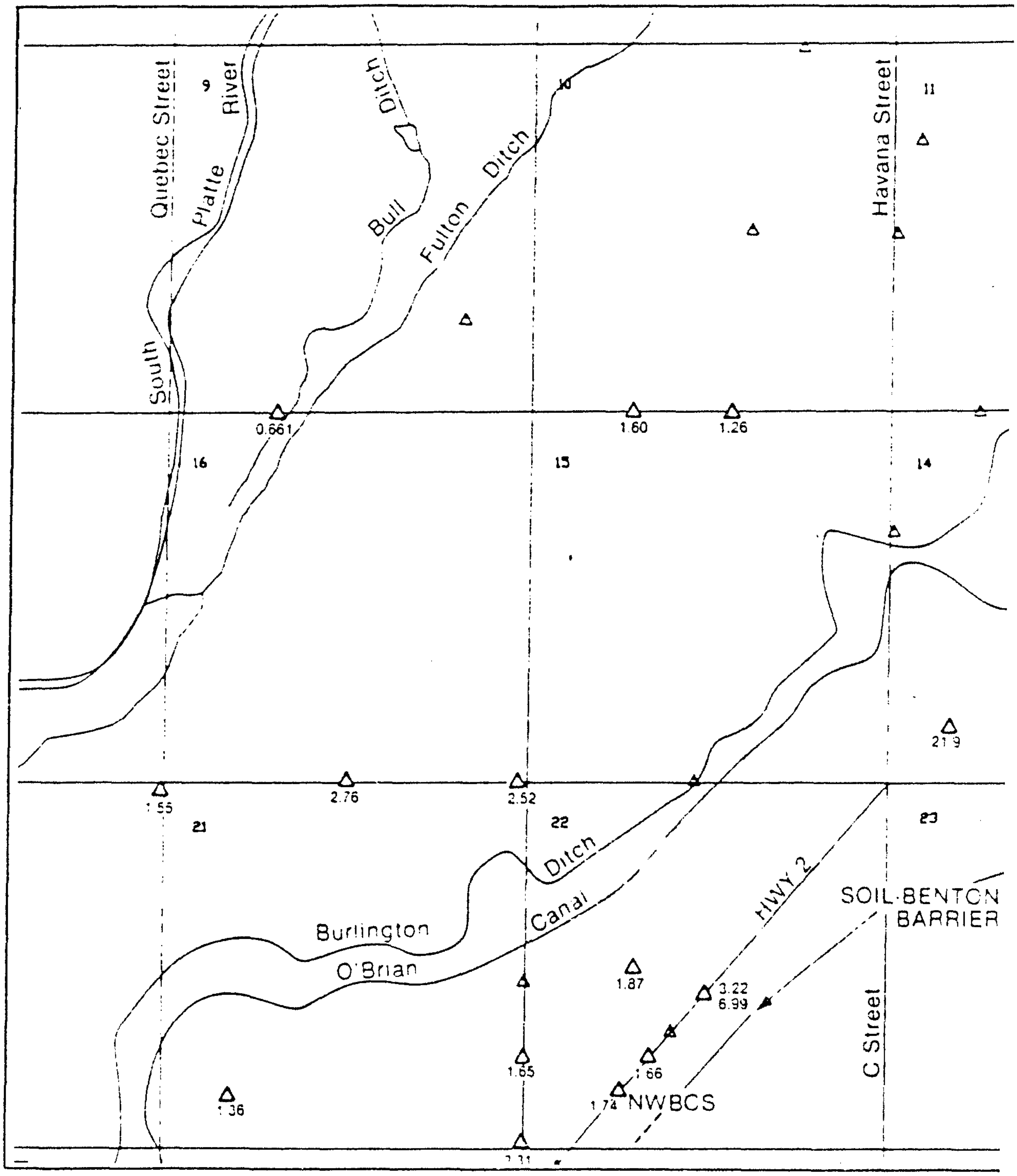
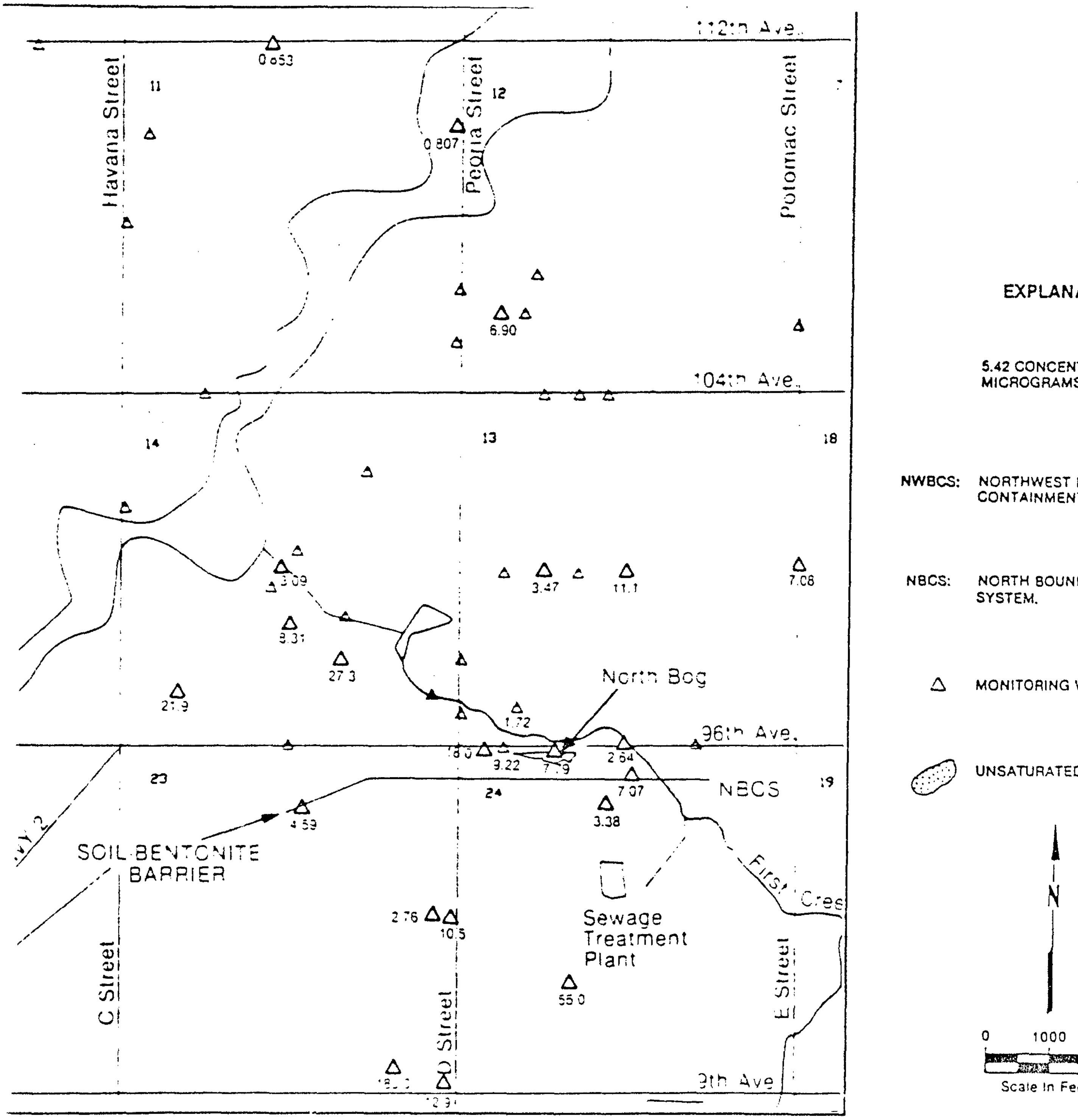


Figure F-32
CHLOROBENZENE CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE,1988



PORTING LIMITS, ug/l,

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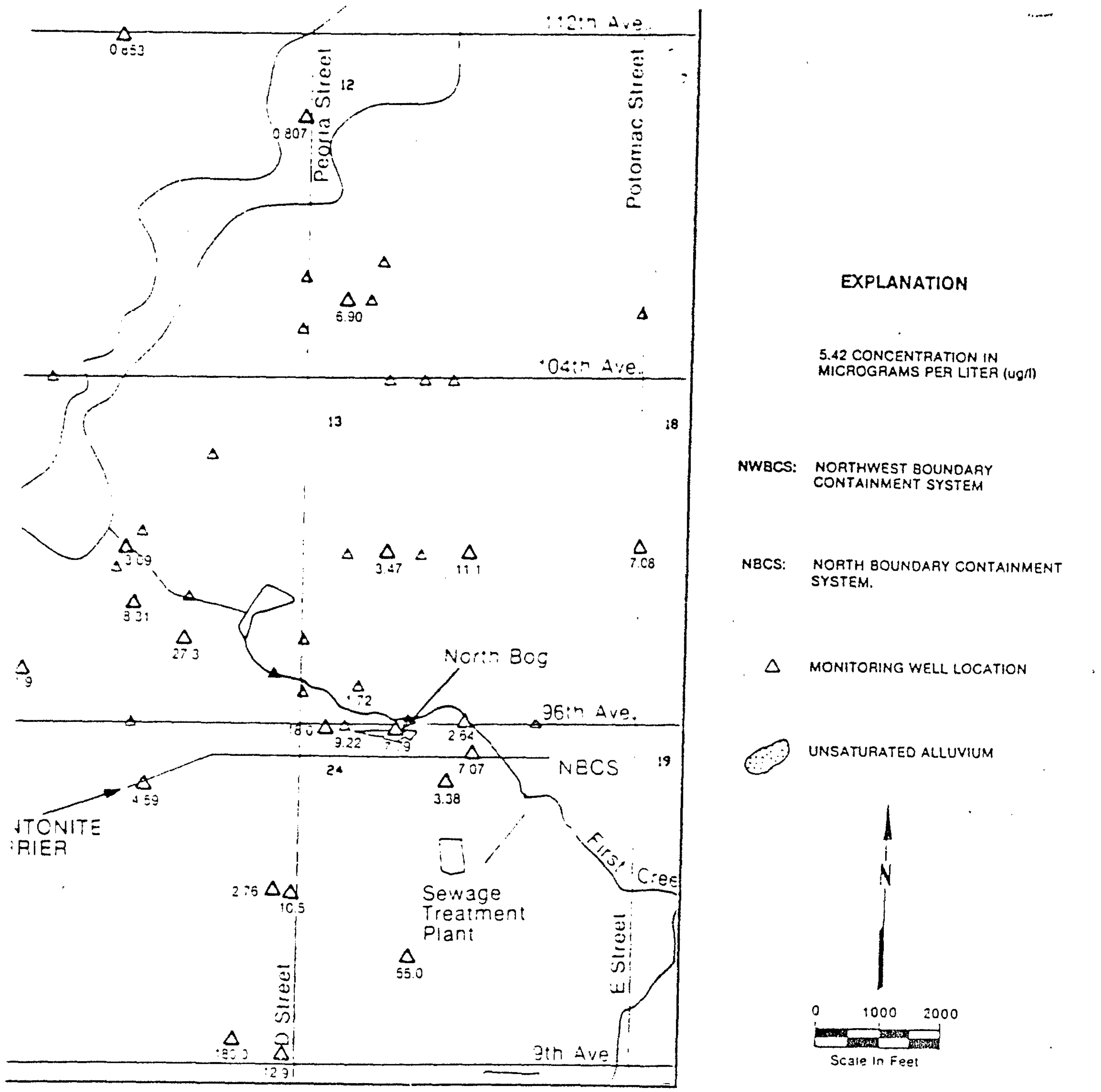
For Rocky Mountain Ar

Aberdeen Proving Ground, Mary



TS, ug/l,

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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

112th Ave

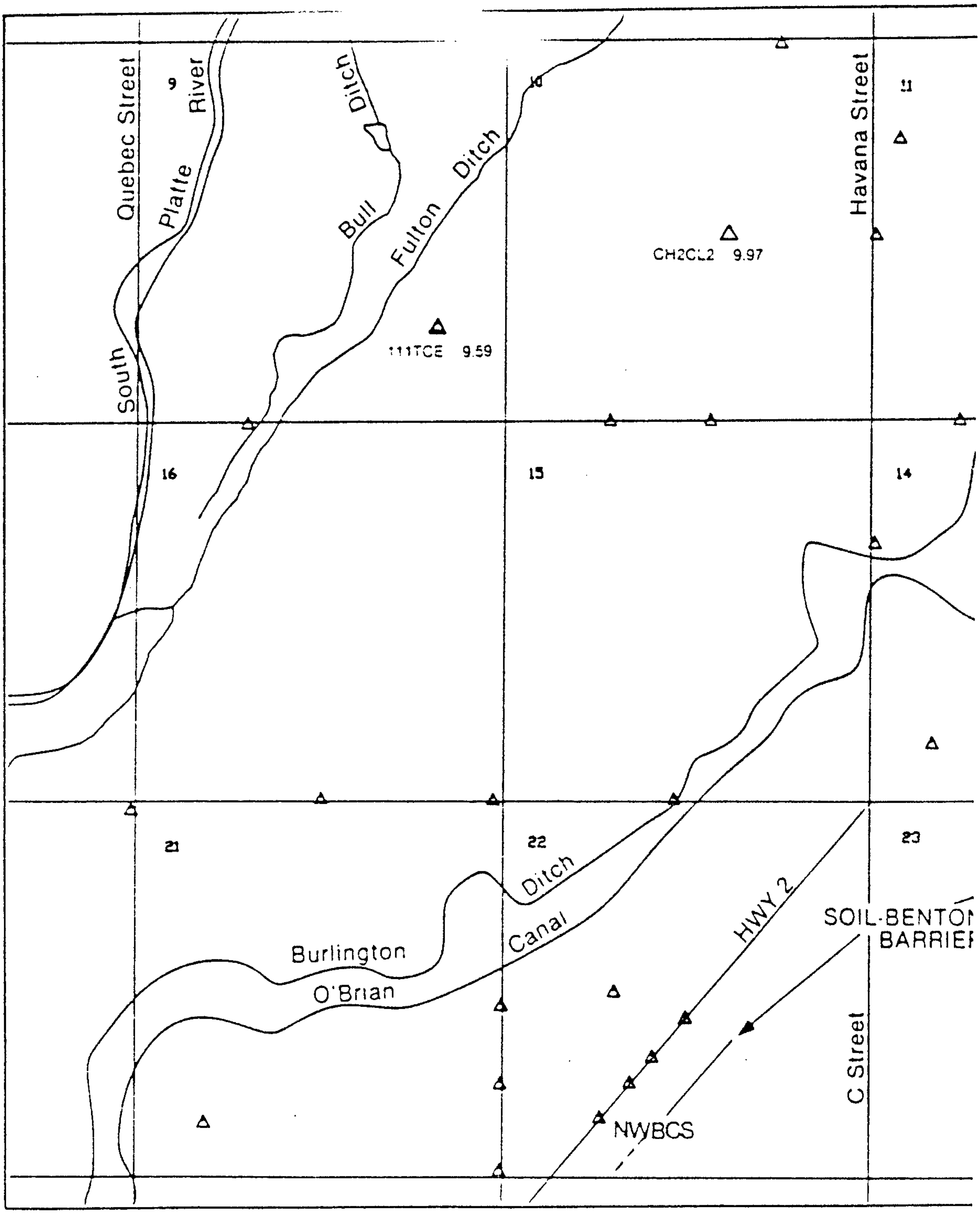
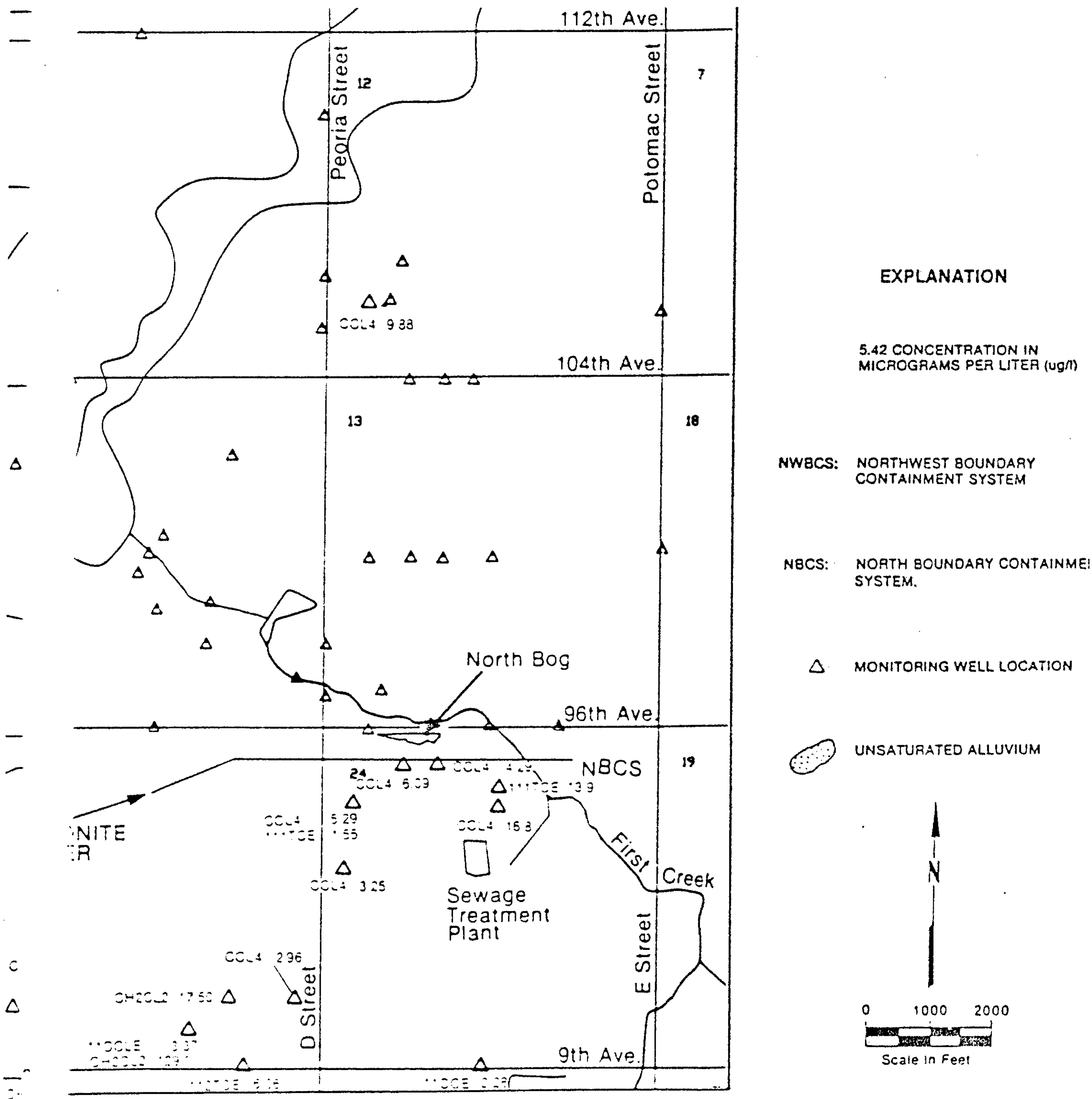


Figure F-33
VOLATILE ORGANOHALOGENS (CCL$_4$, 12DCE, 11DCE, 11DCLE, 111TCE, 12TCE, CH$_2$
CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 3RD QUARTE
FY87 ALLUVIAL AQUIFER
SOURCE:ESE,1988



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ER,

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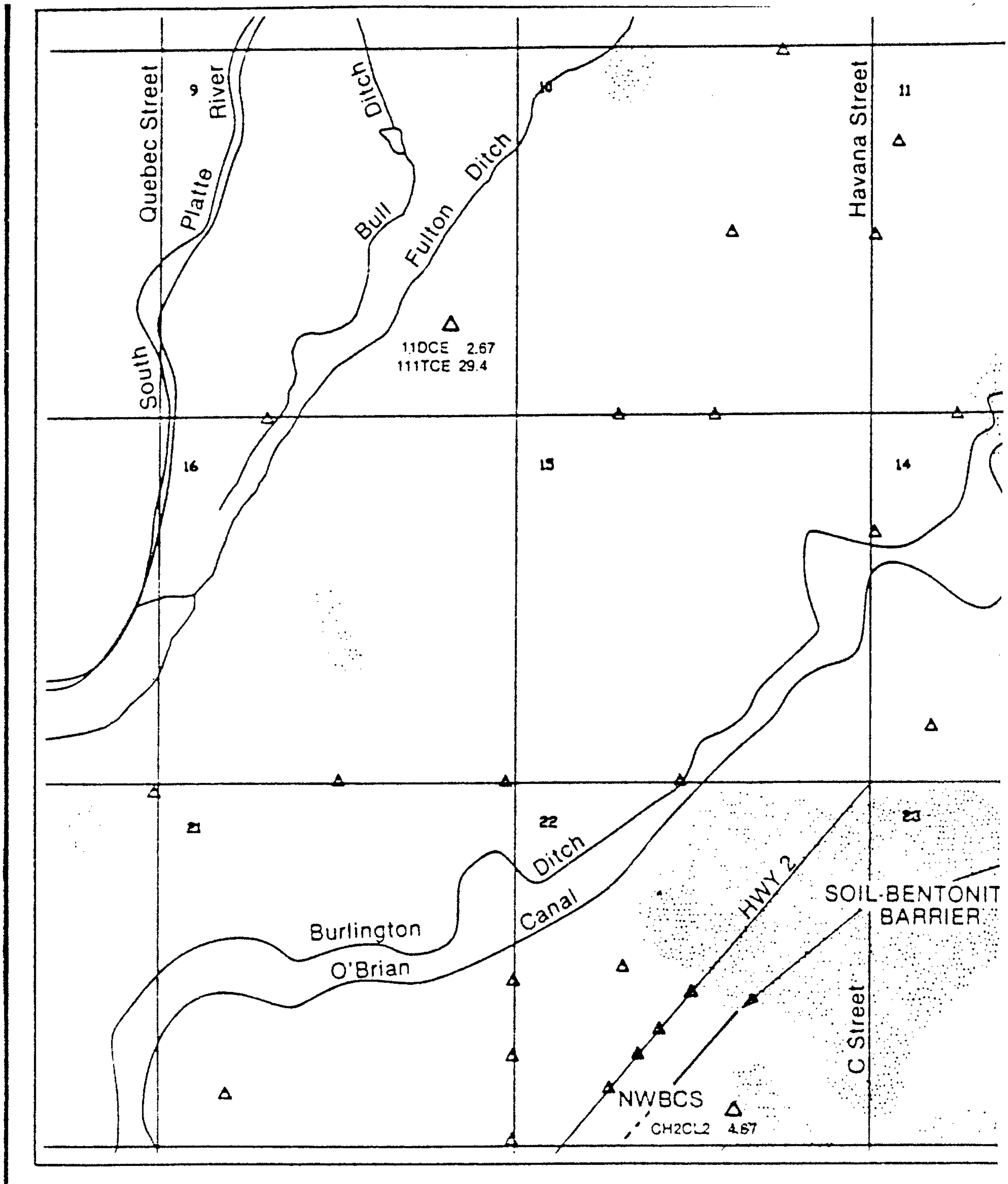
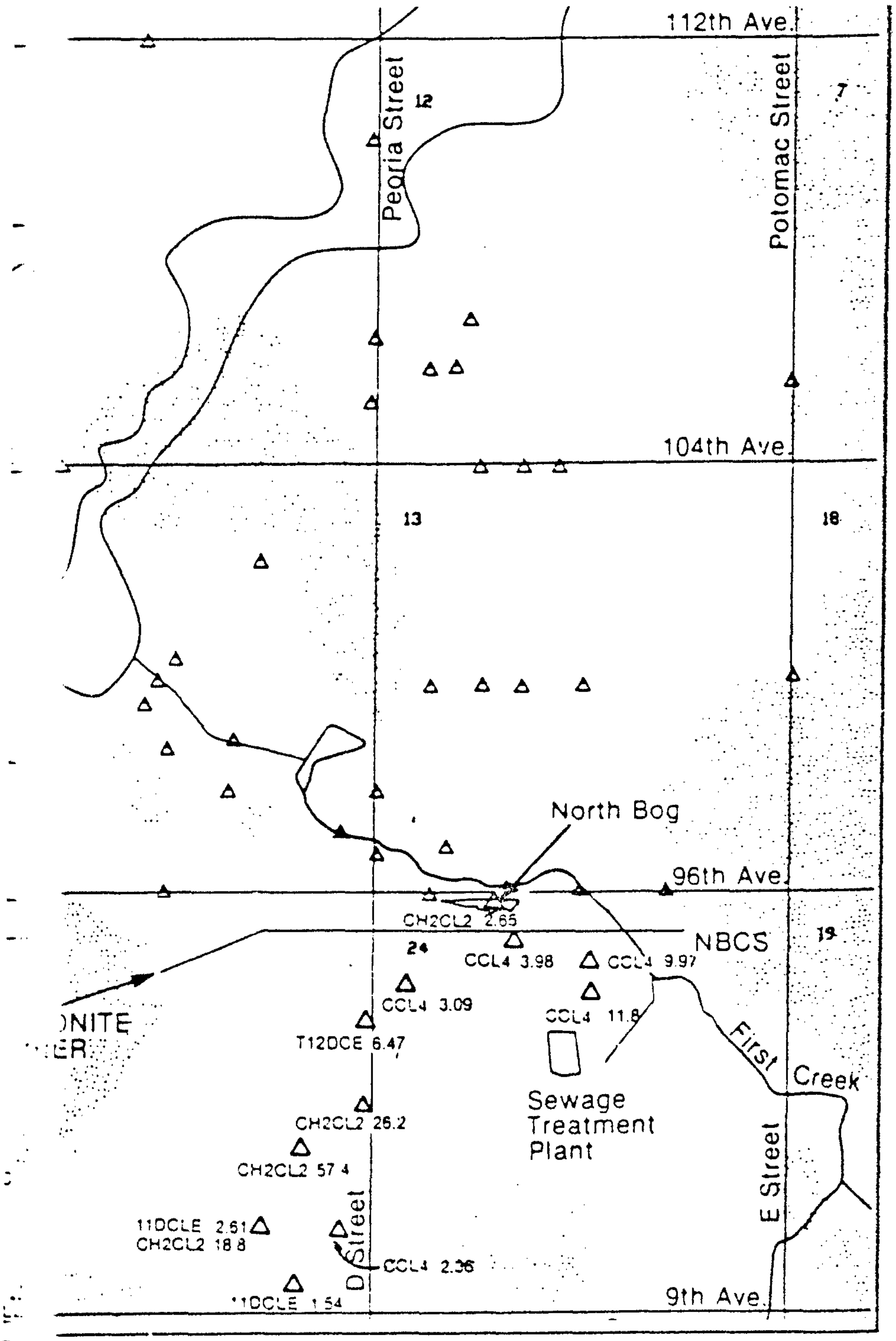


Figure F-34
VOLATILE ORGANOHALOGENS (CCL_4, 12DCE, 11DCE, 11DCLE, 111TCE, 12TCE, CH_2CL
EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 4TH QUARTER, FY87,
ALLUVIAL AQUIFER
SOURCE: ESE, 1988



EXPLANATION

5.42 CONCENTRATION IN MICROGRAMS PER LITER (ug/l)

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

△ MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale in Feet

H_2CL_2)

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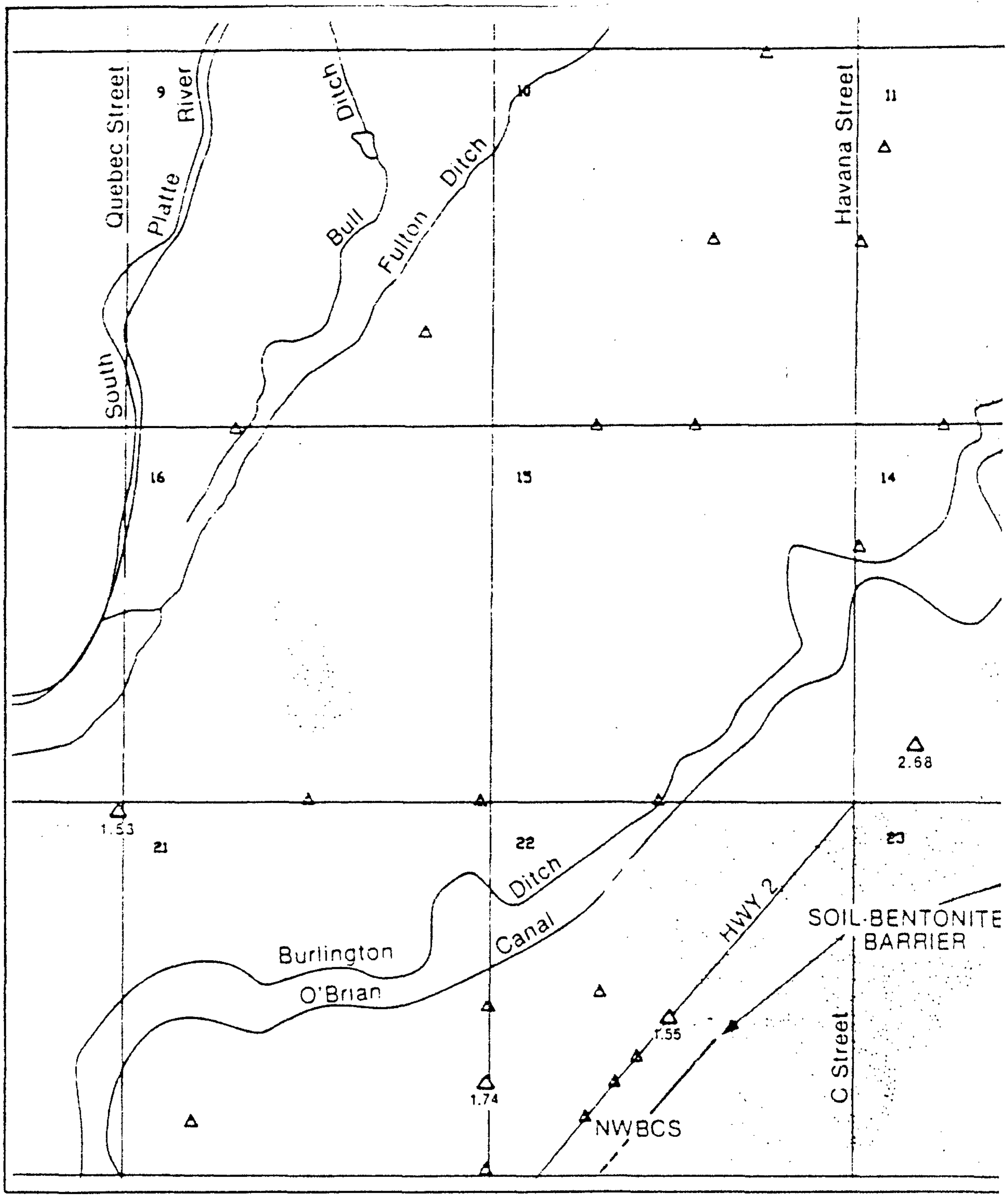
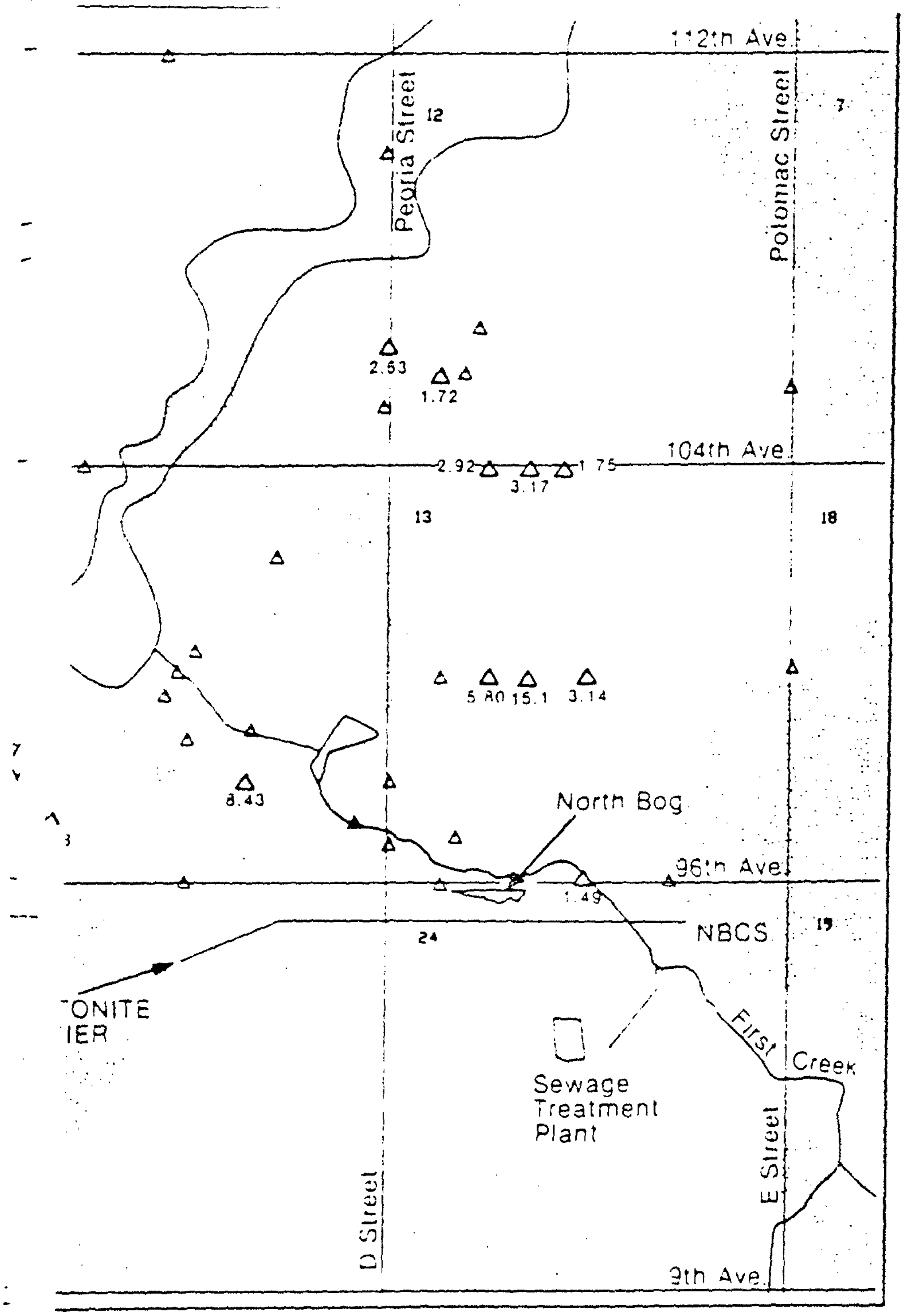


Figure F-35
BENZENE CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 3RD QUARTER, FY 87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



EXPLANATION

5.42 CONCENTRATION IN MICROGRAMS PER LITER (ug/l)

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINME SYSTEM.

△ MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale in Feet

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For Rocky Mountain Arsenal

Aberdeen Froving Ground, Maryland

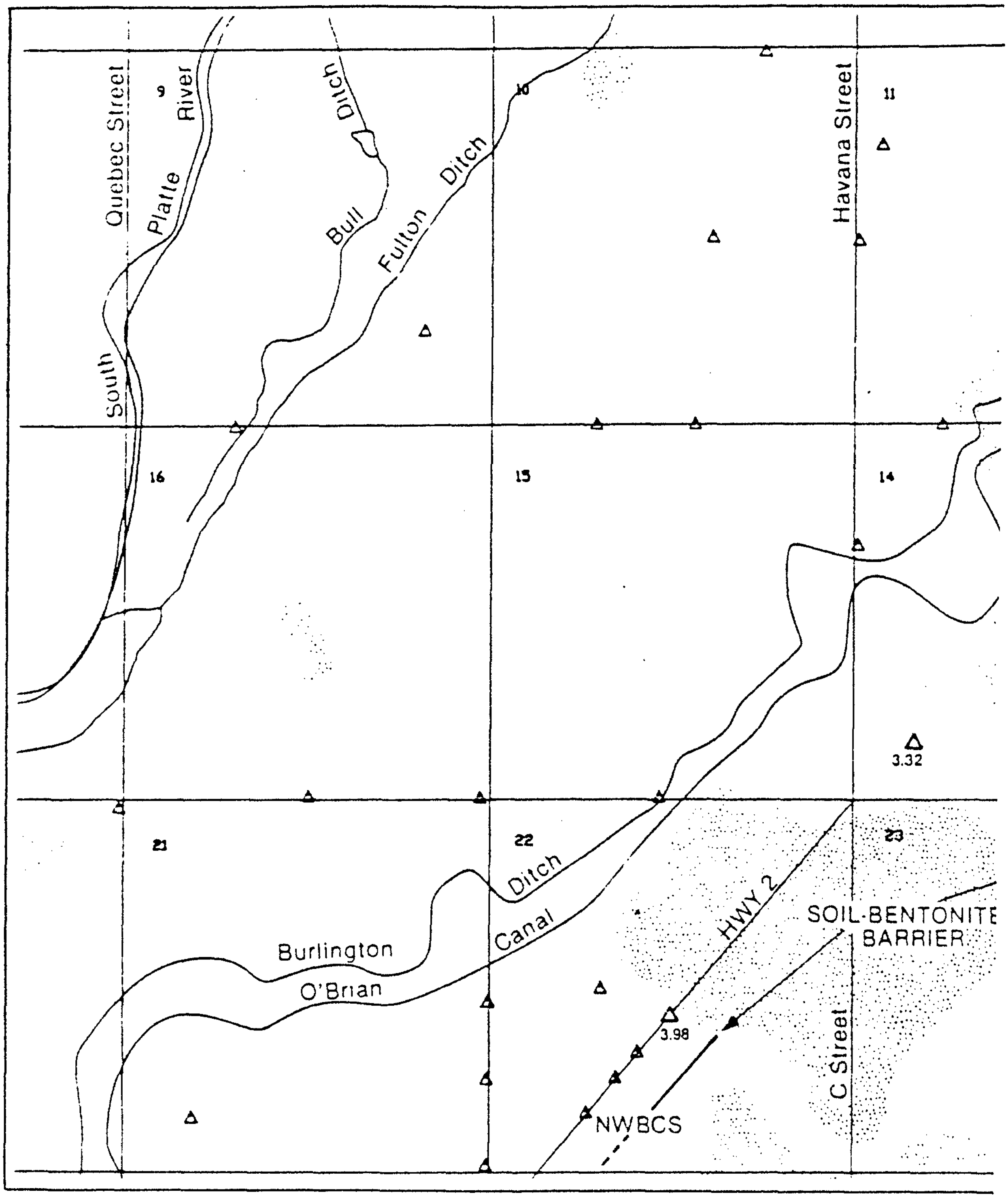
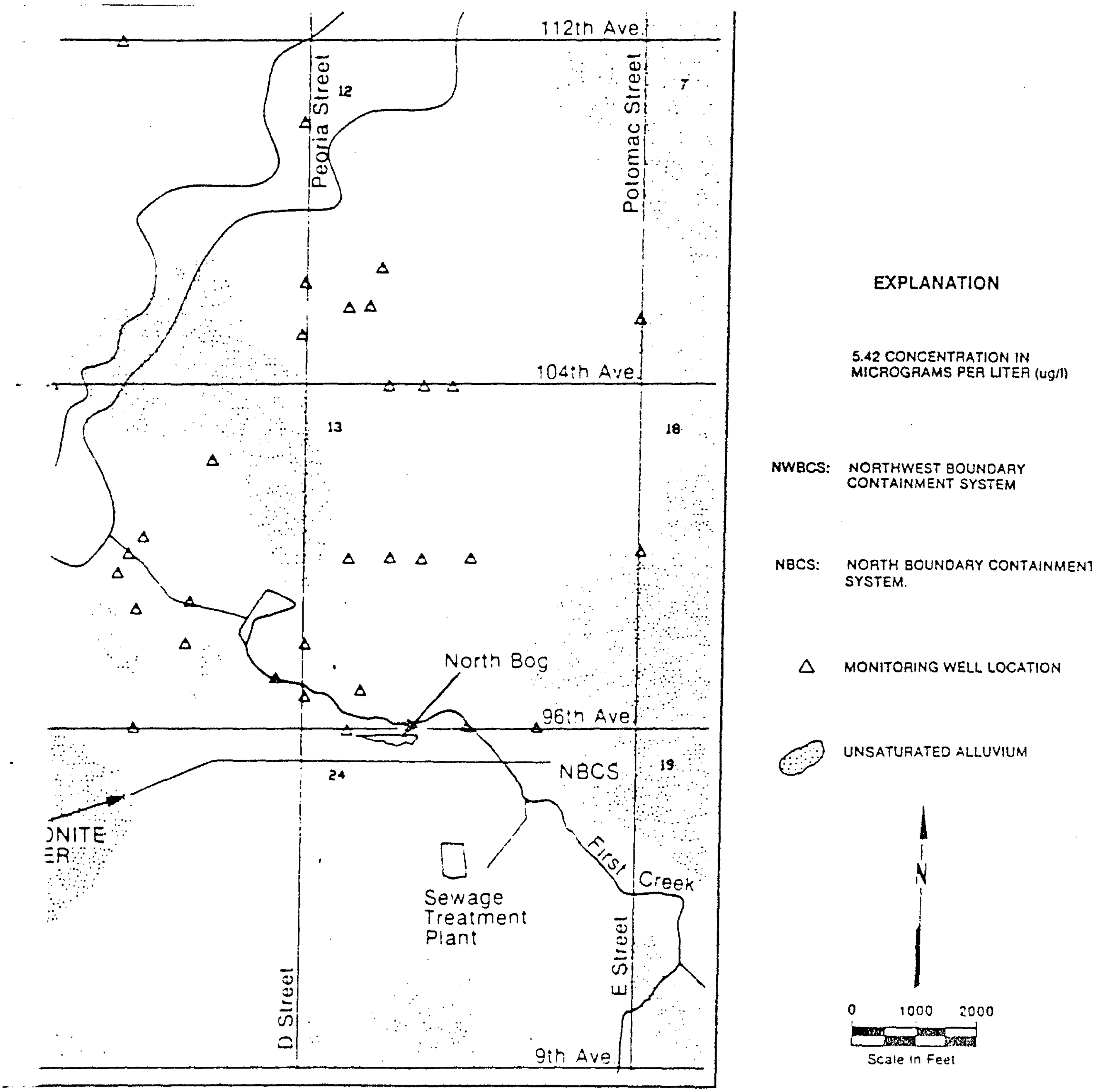


Figure F-36
BENZENE CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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Aberdeen Proving Ground, Maryland

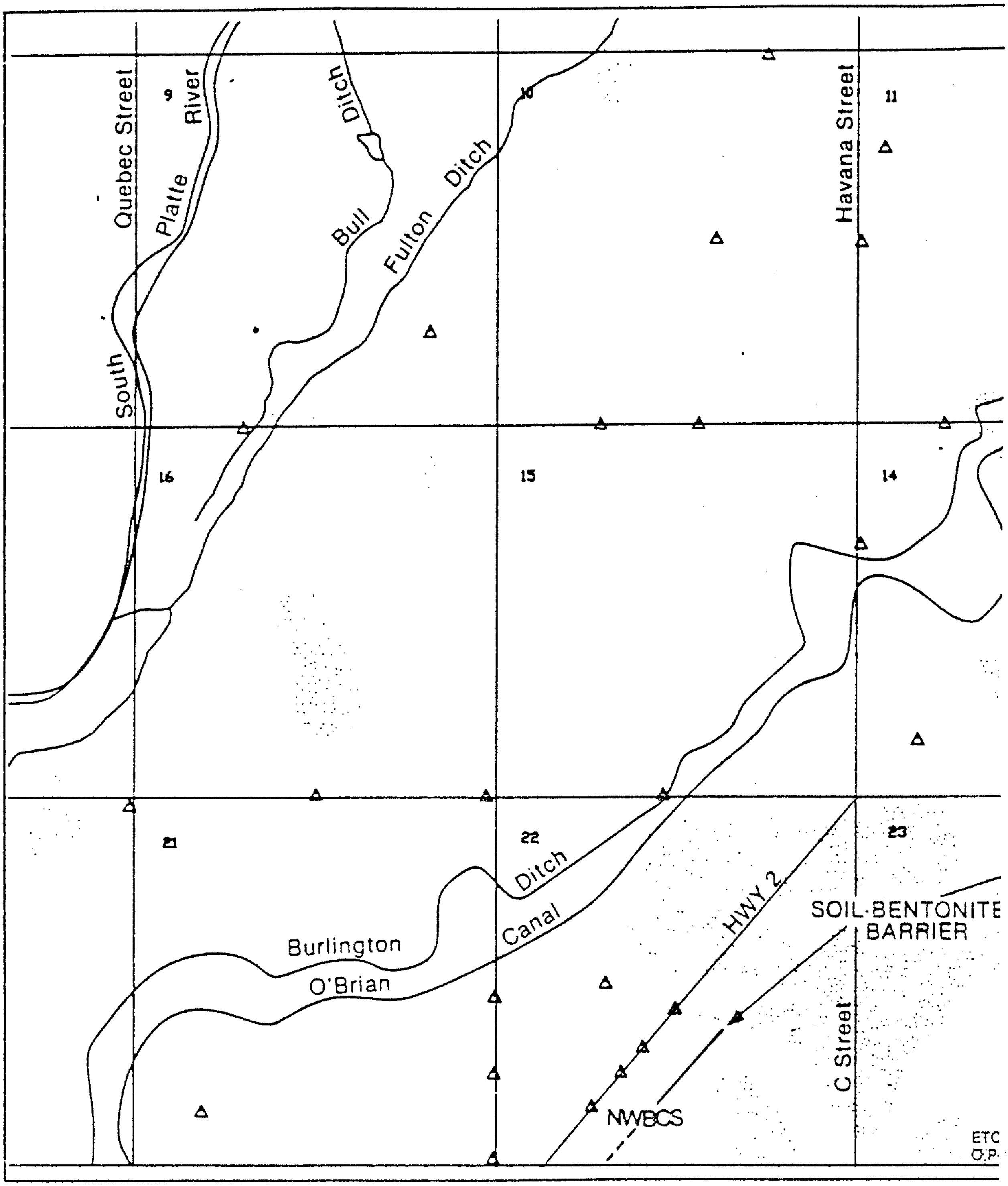
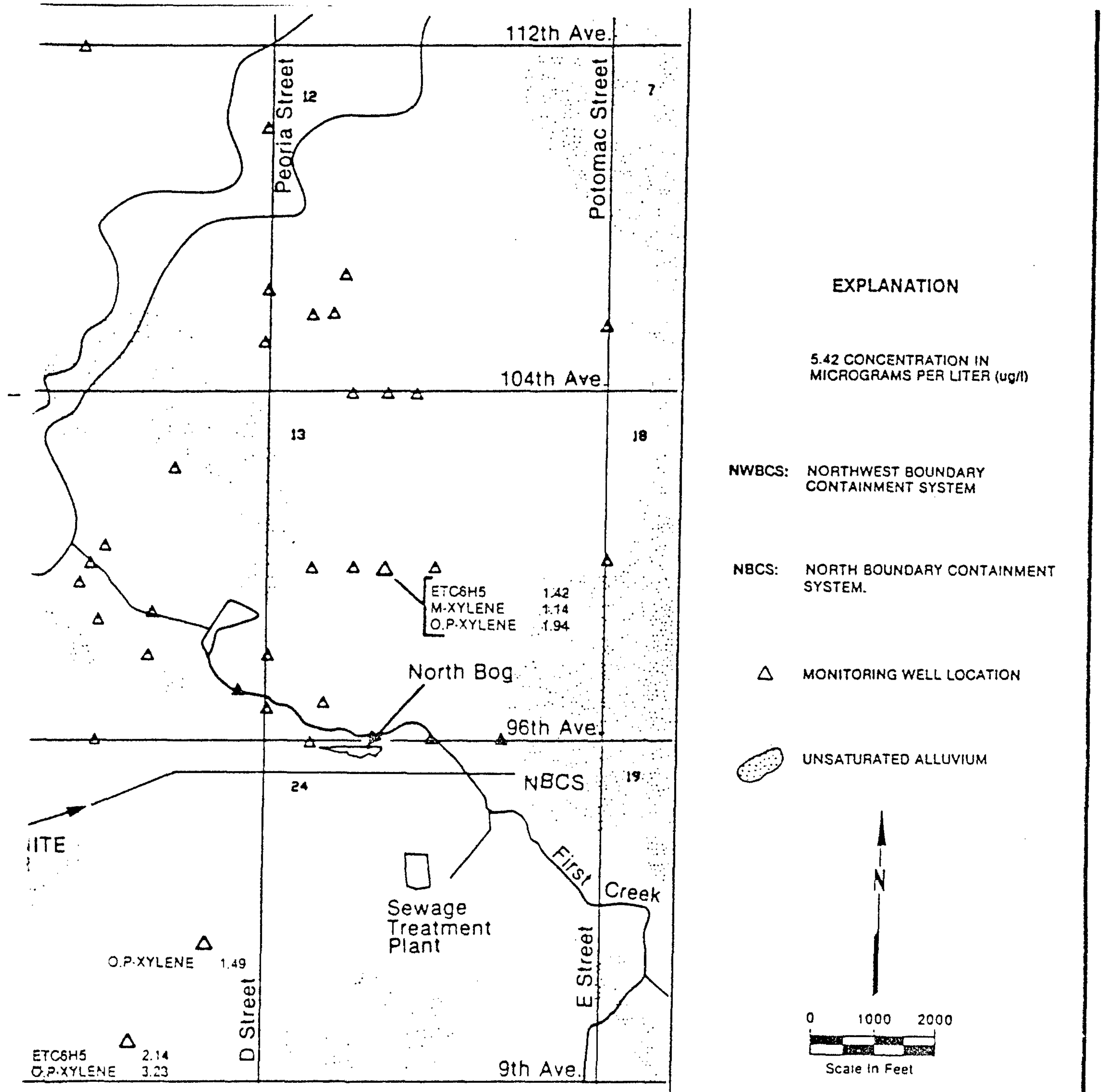


Figure F-37

VOLATILE AROMATICS (ETHYLBENZENE, M-XYLENE, O,P-XYLENE) EXCEEDING CERTI
ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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Aberdeen Proving Ground, Maryland

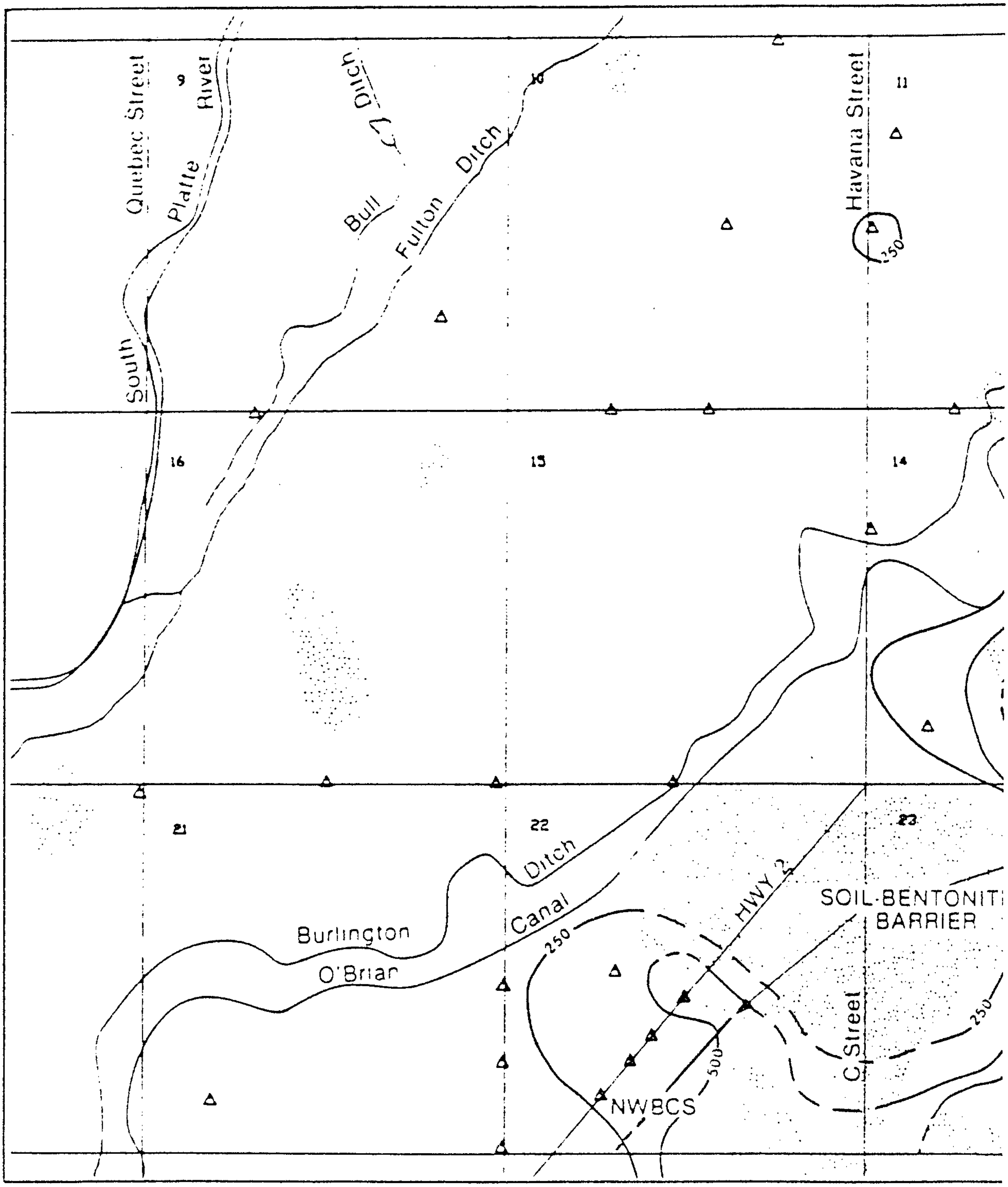
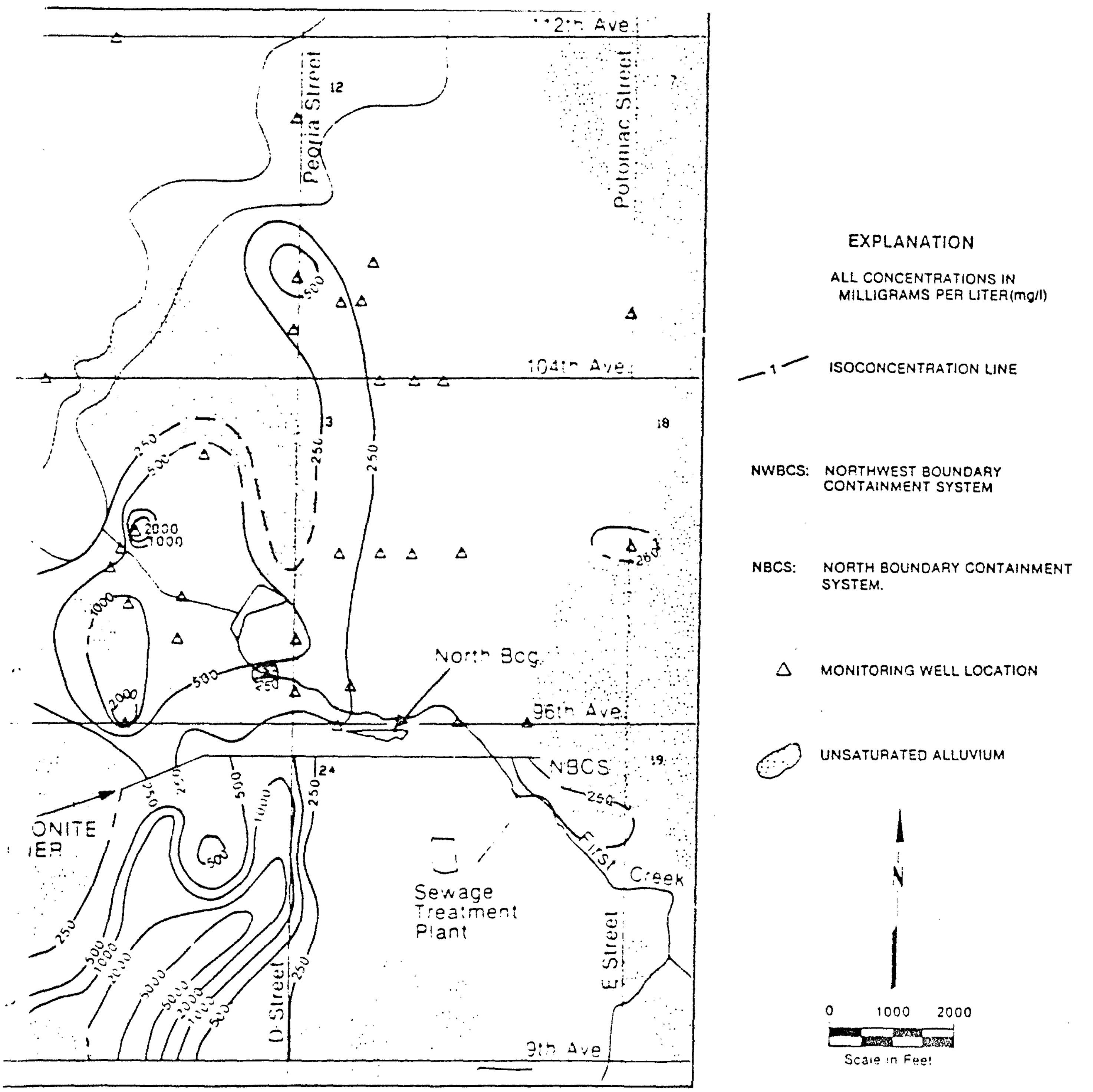


Figure F-38
CHLORIDE CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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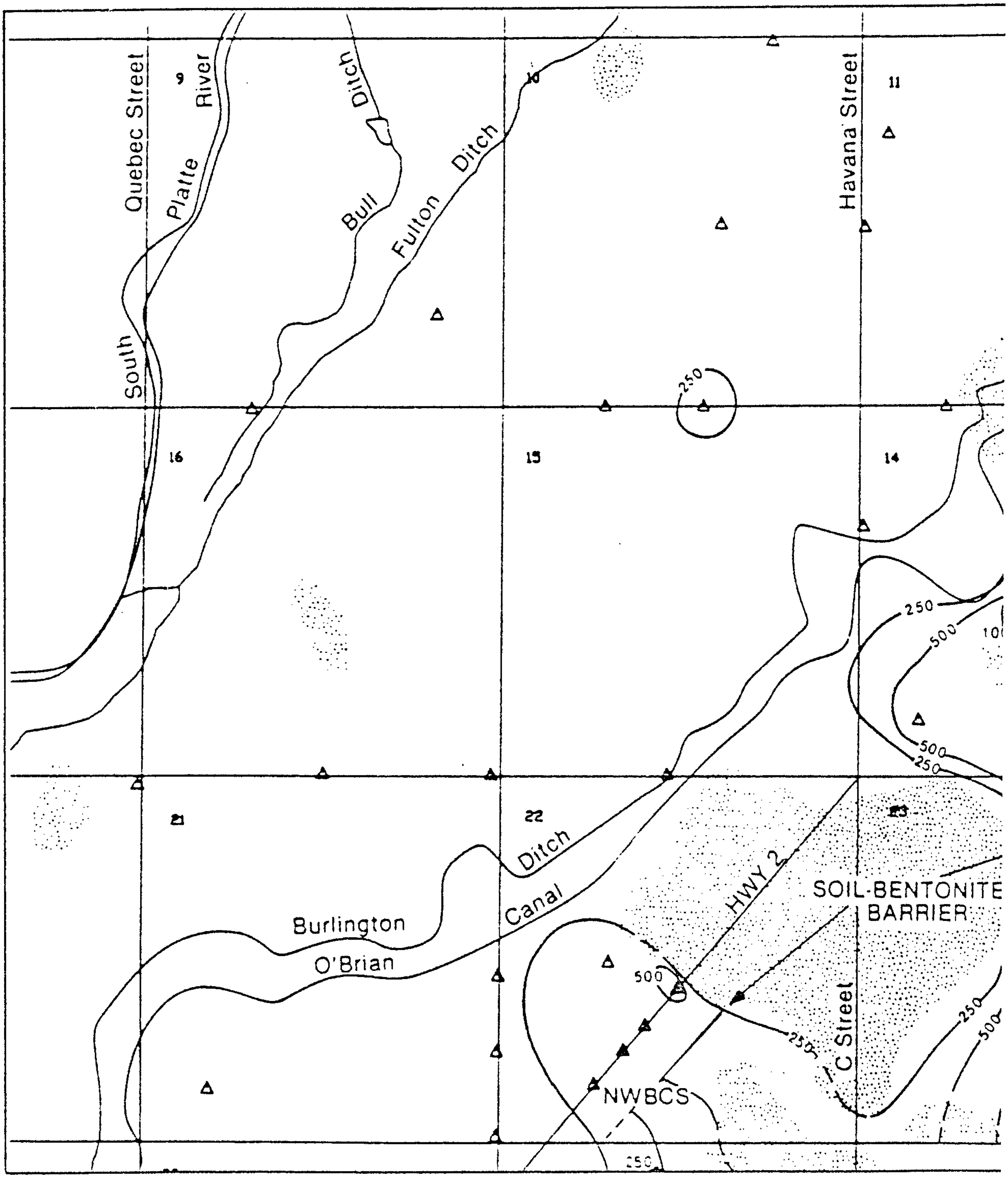
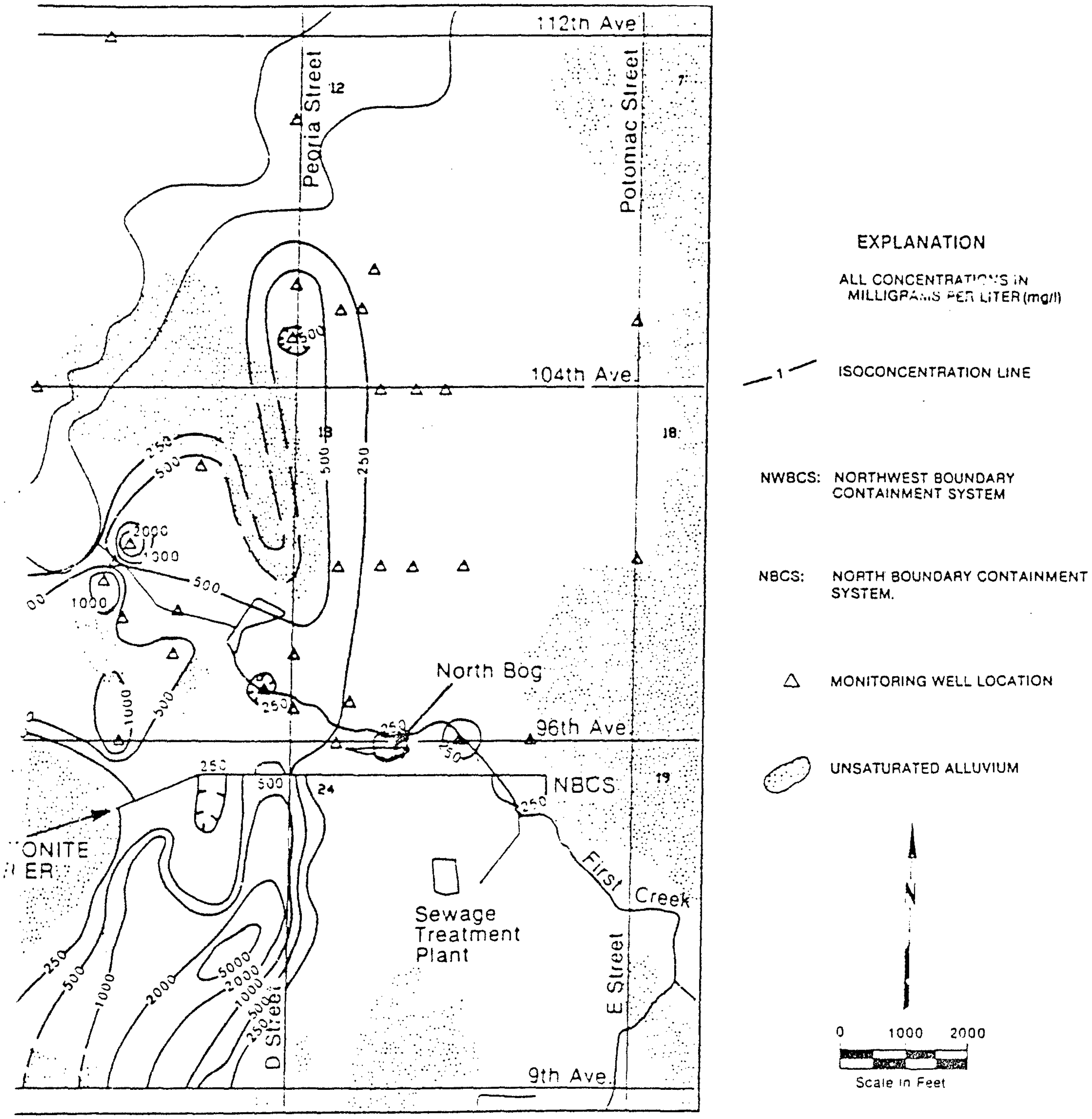


Figure F-39
CHLORIDE CONCENTRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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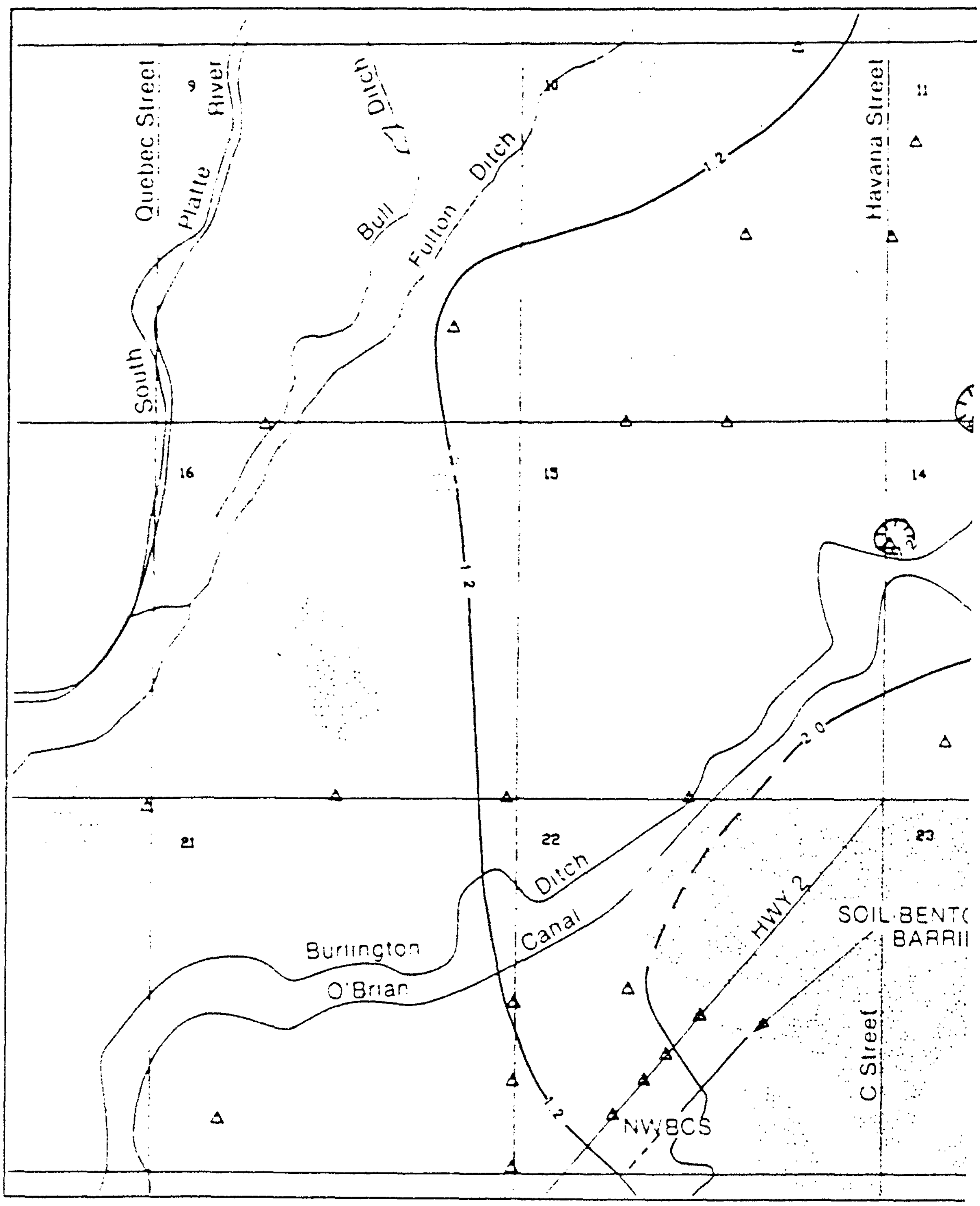
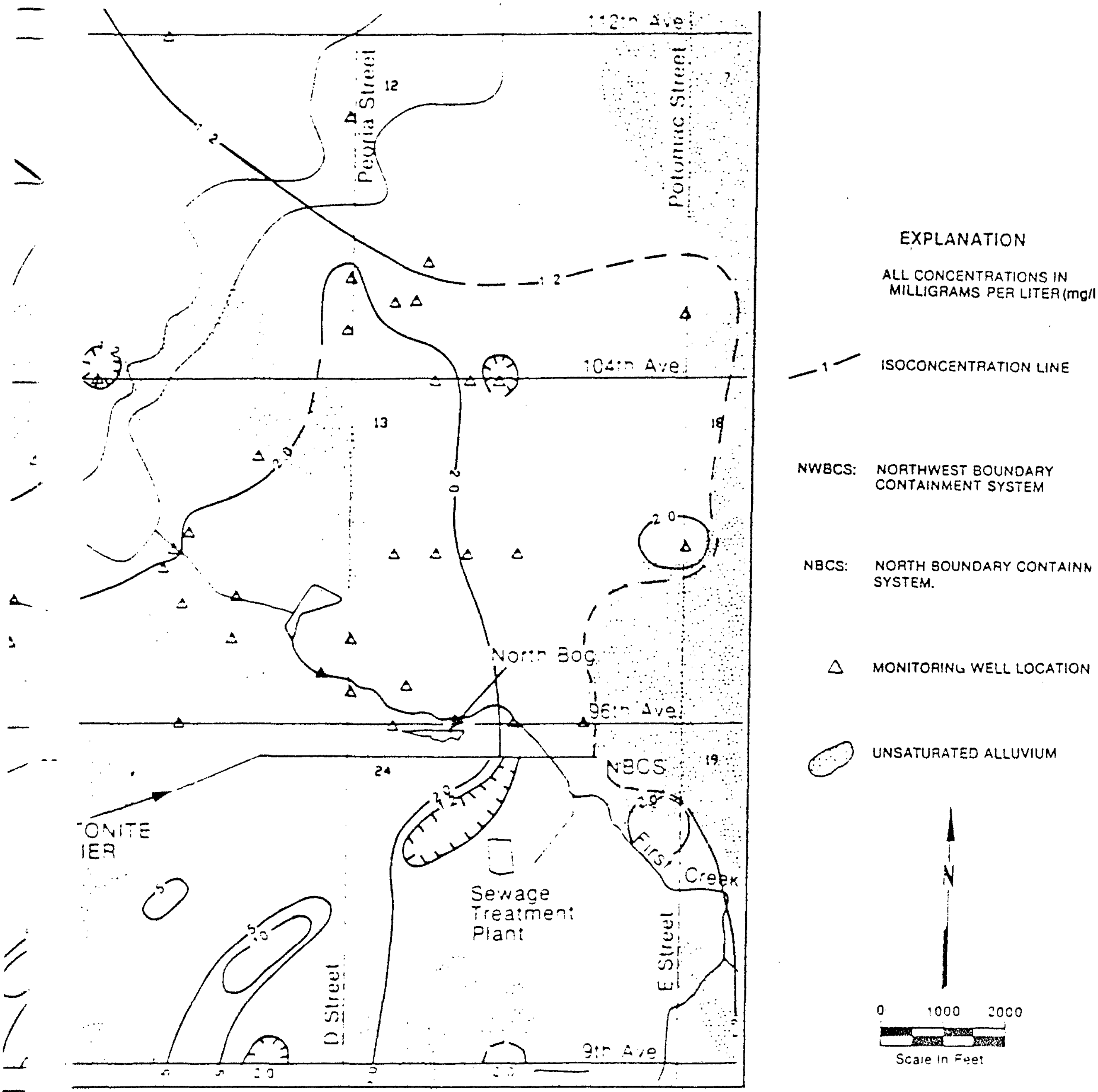


Figure F-40
FLUORIDE CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE, 1988



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Aberdeen Proving Ground, Maryland

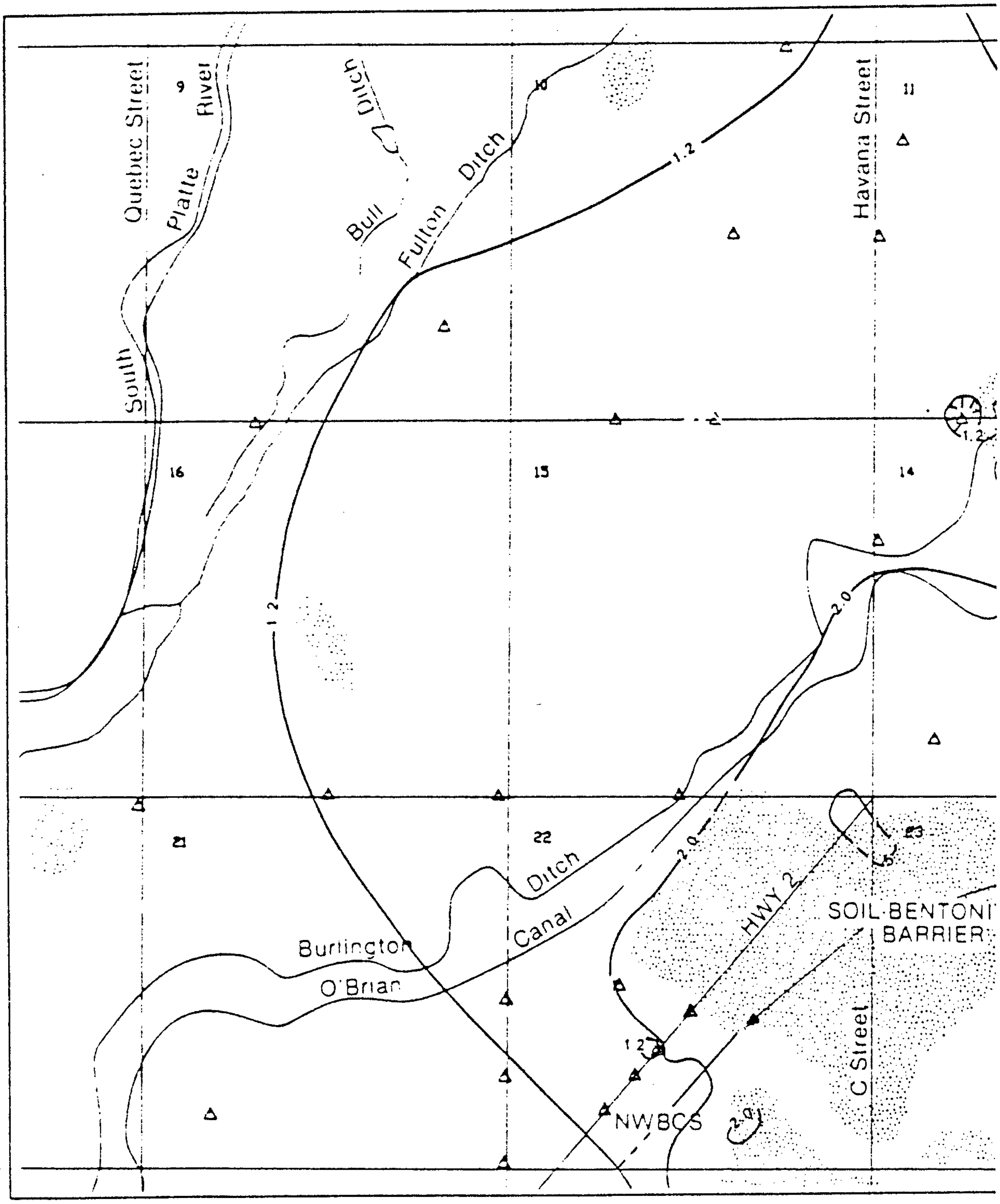
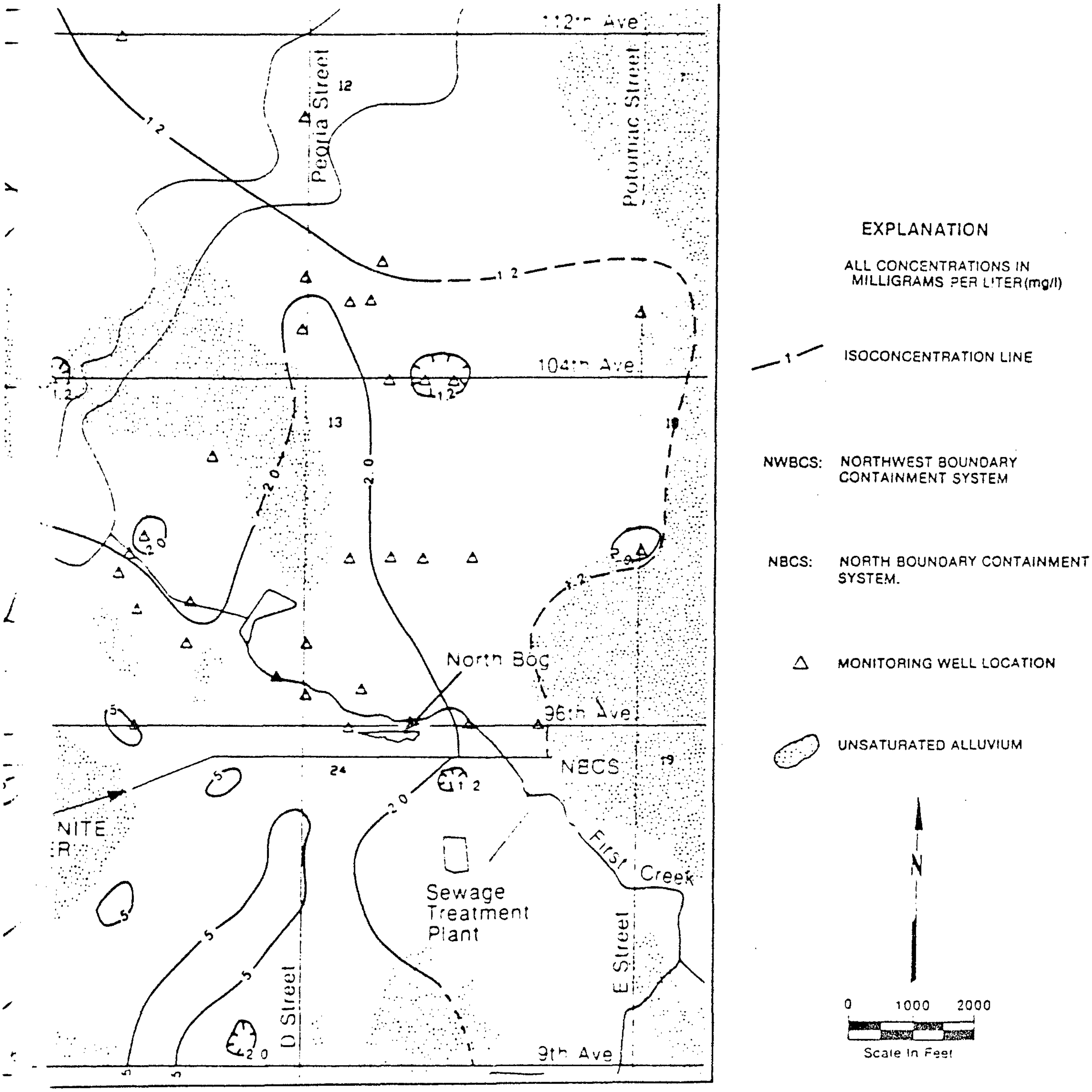


Figure F-41
FLUORIDE CONCENTRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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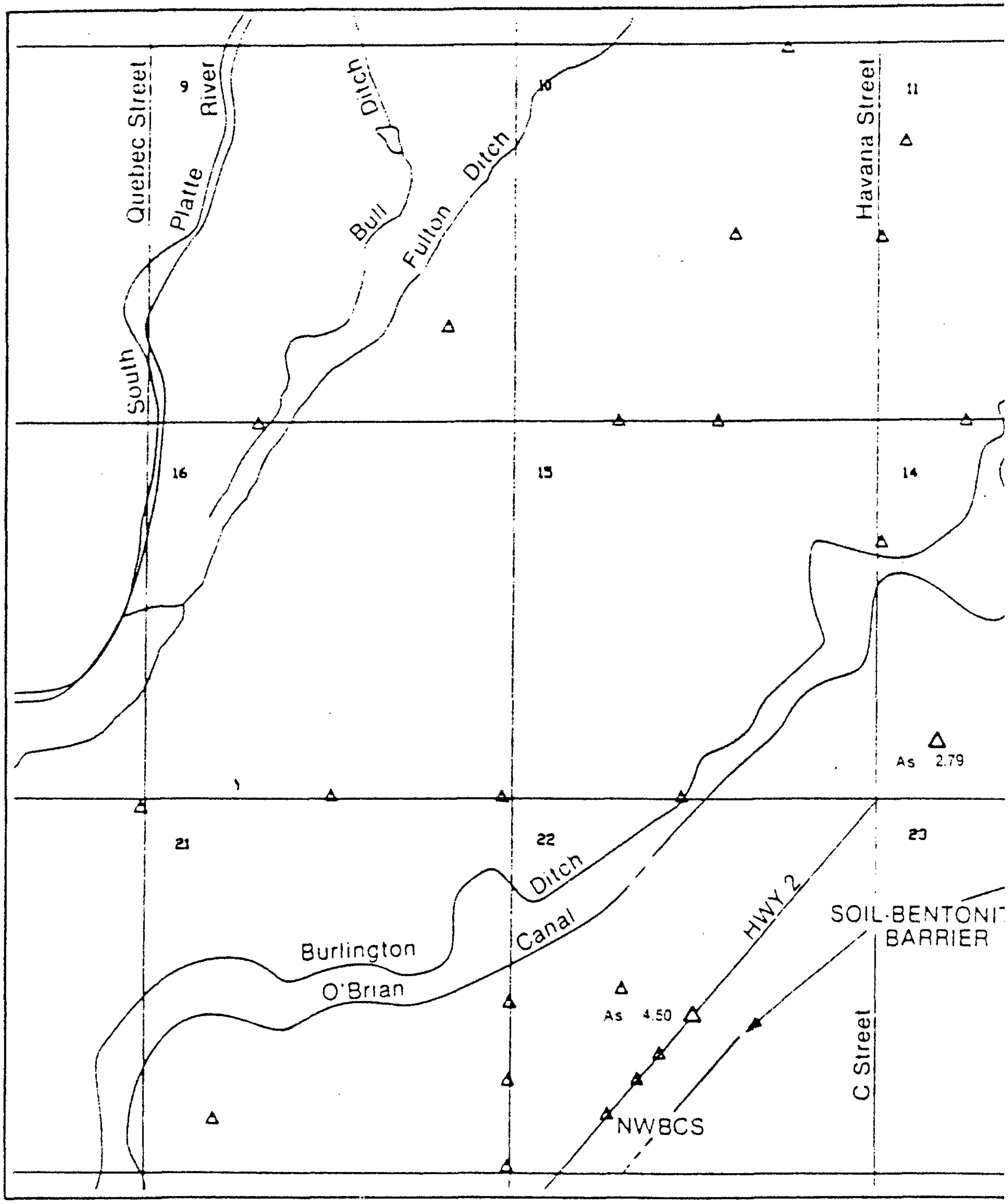
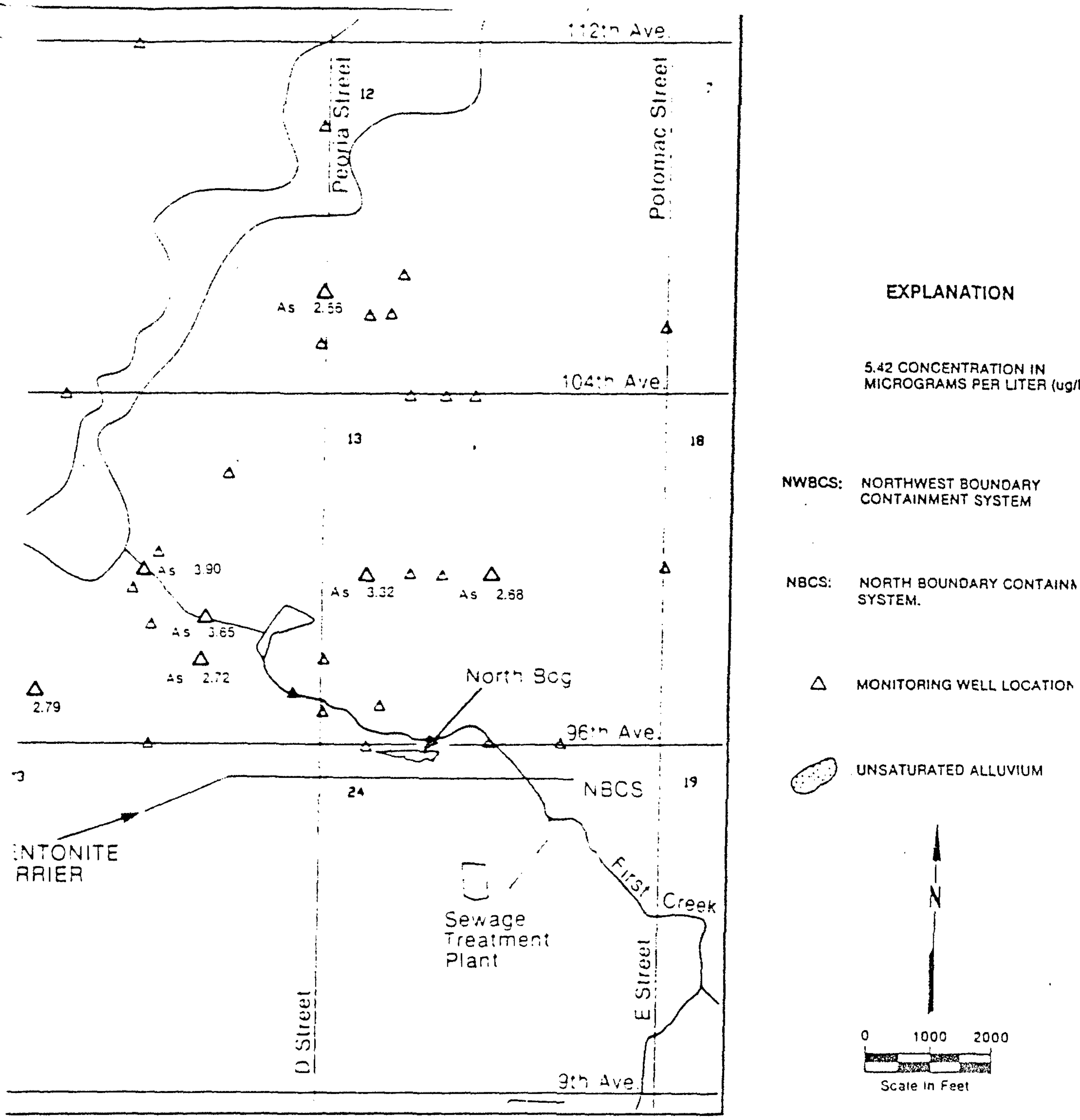


Figure F-42
ARSENIC (As) AND MERCURY (Hg) CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l,3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE.ESE.1988



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Aberdeen Proving Ground, Maryland

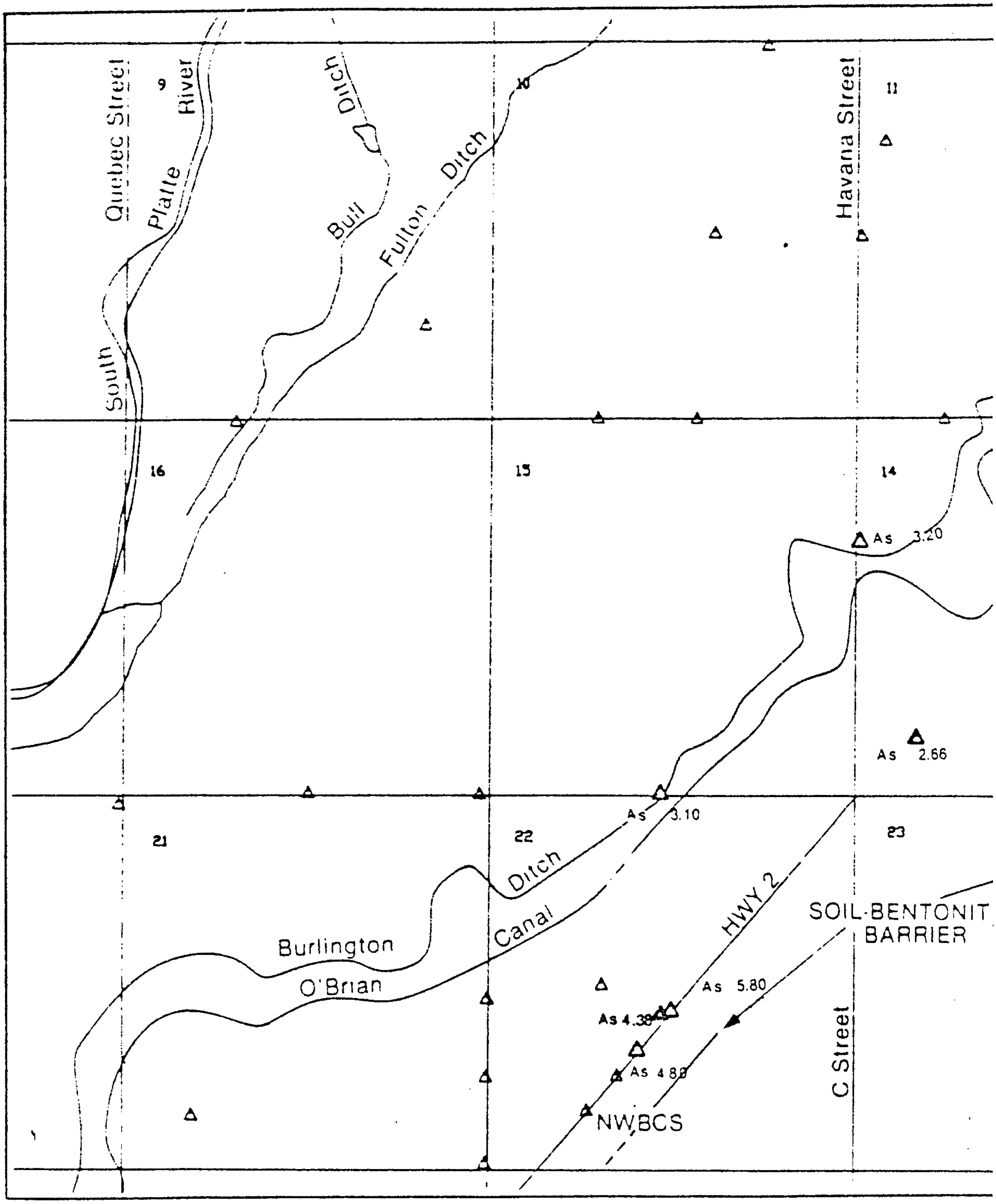
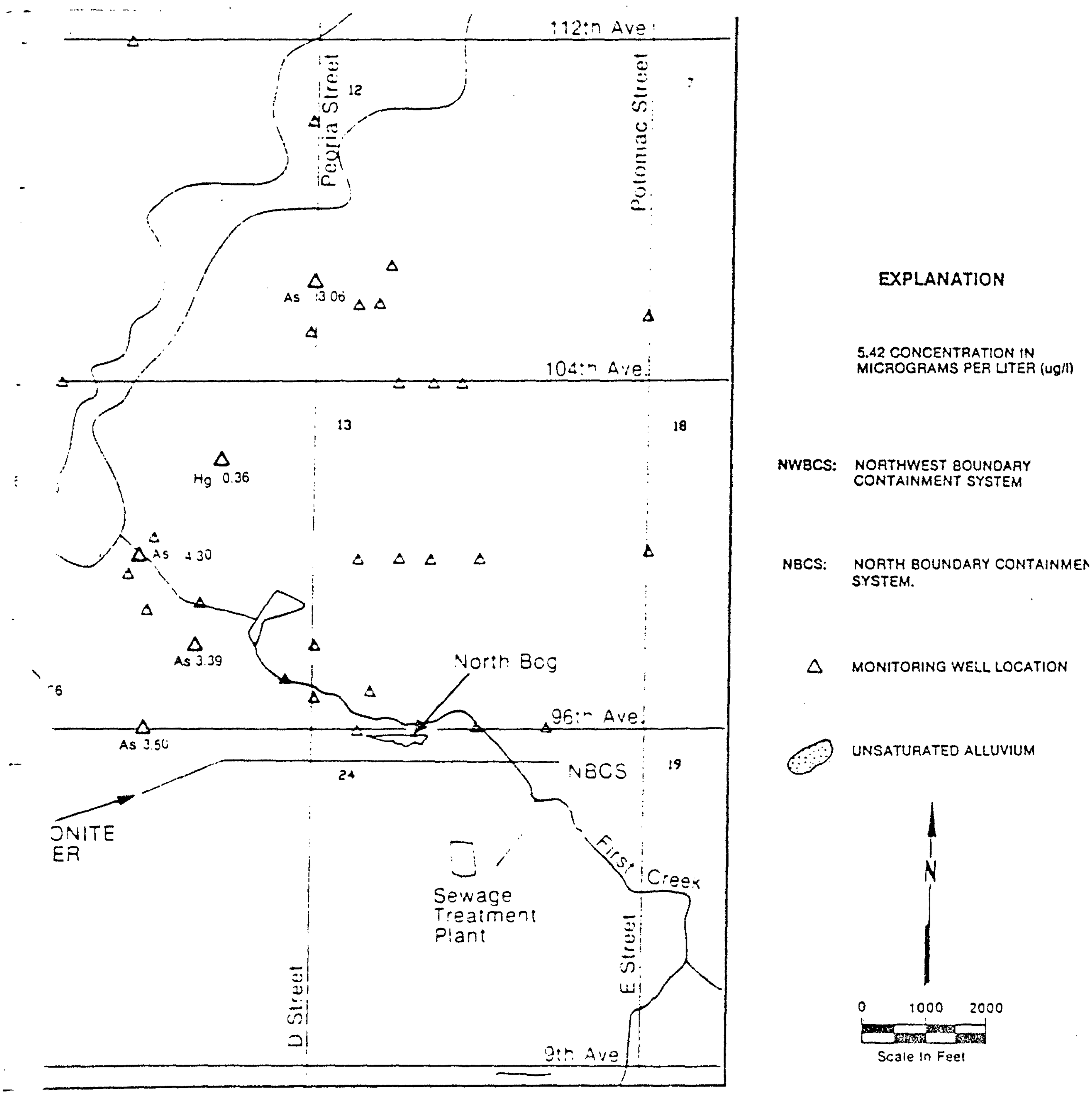


Figure F-43
ARSENIC (As) AND MERCURY (Hg) CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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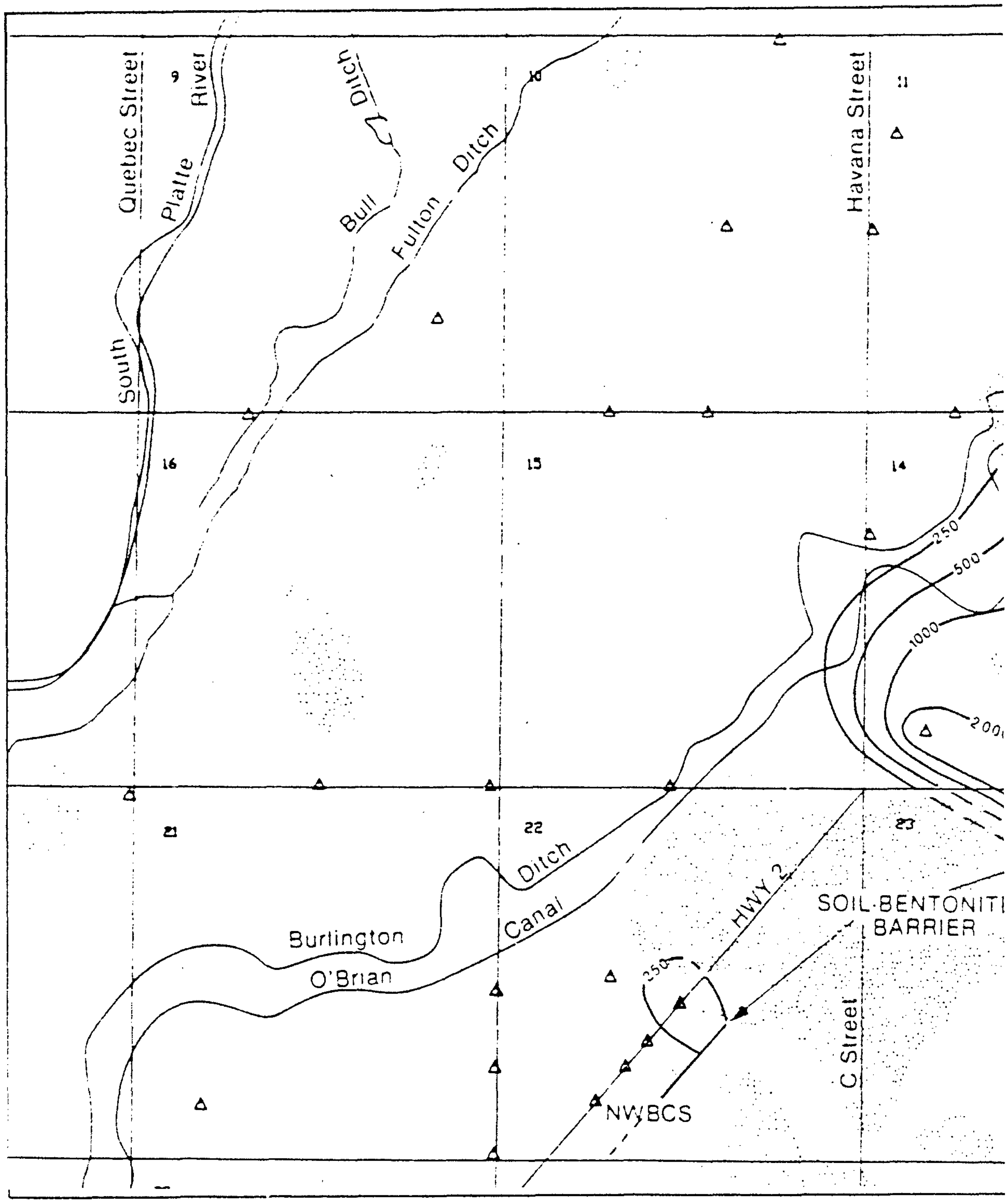
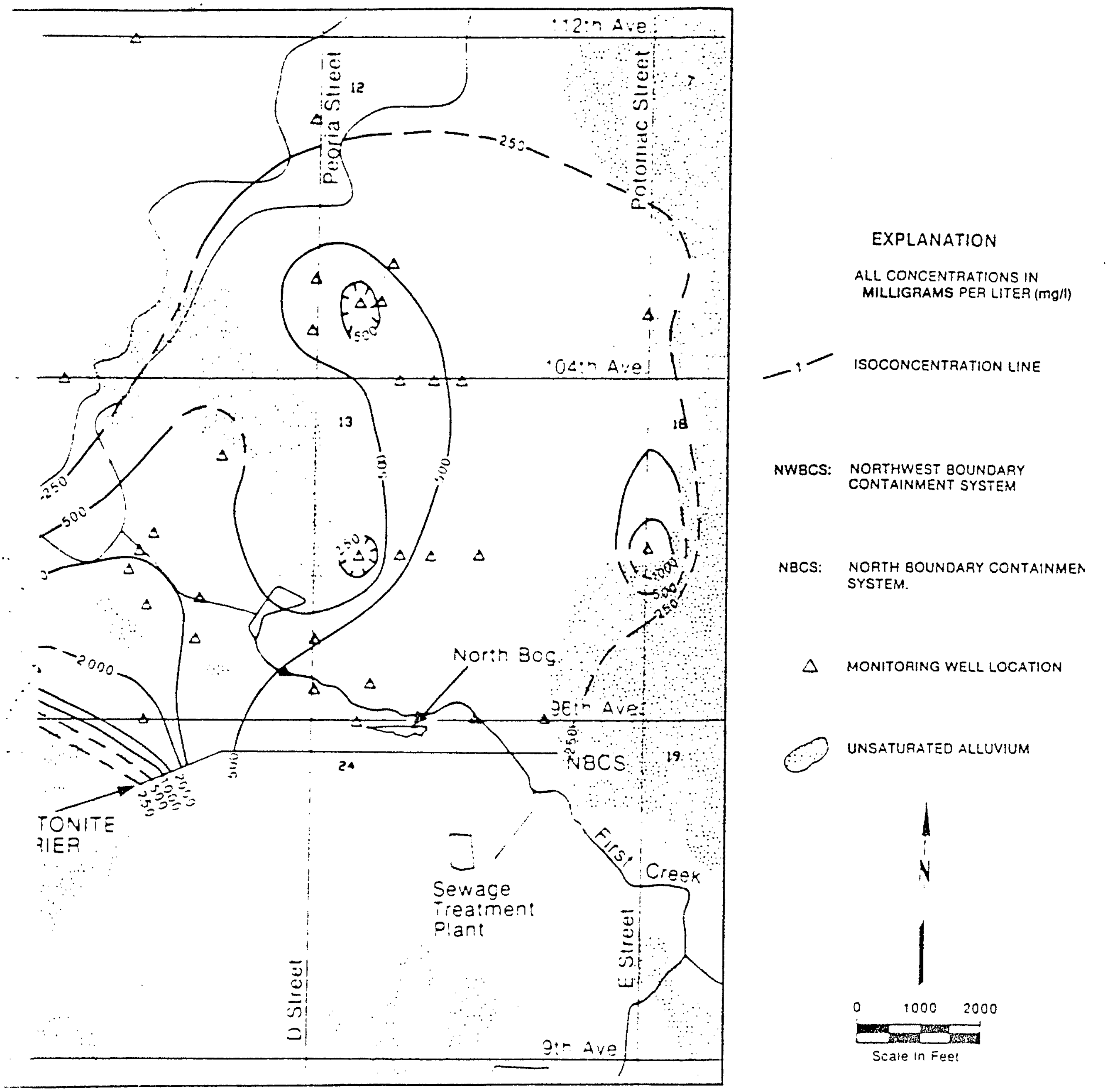


Figure F-44
SULFATE CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

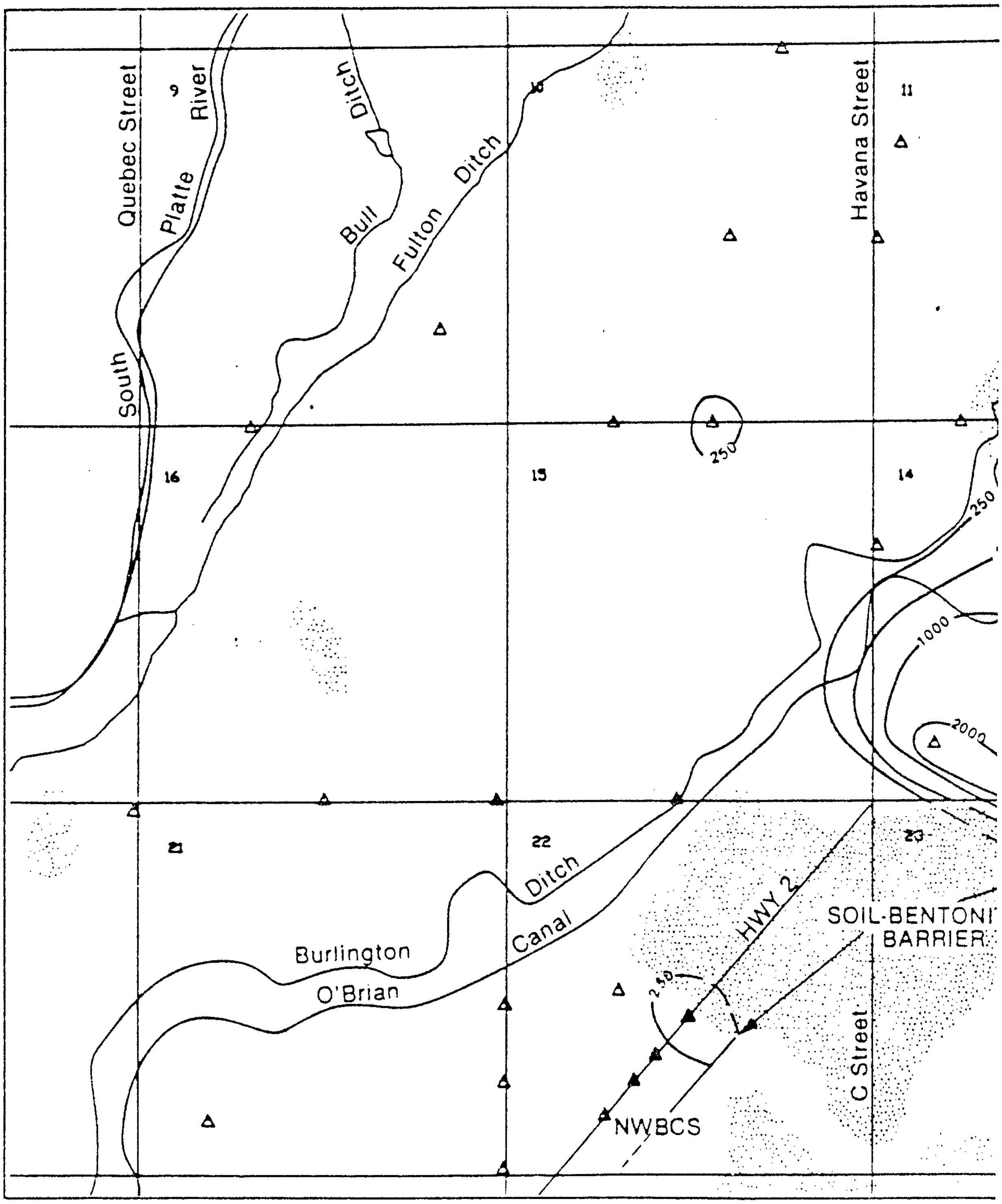
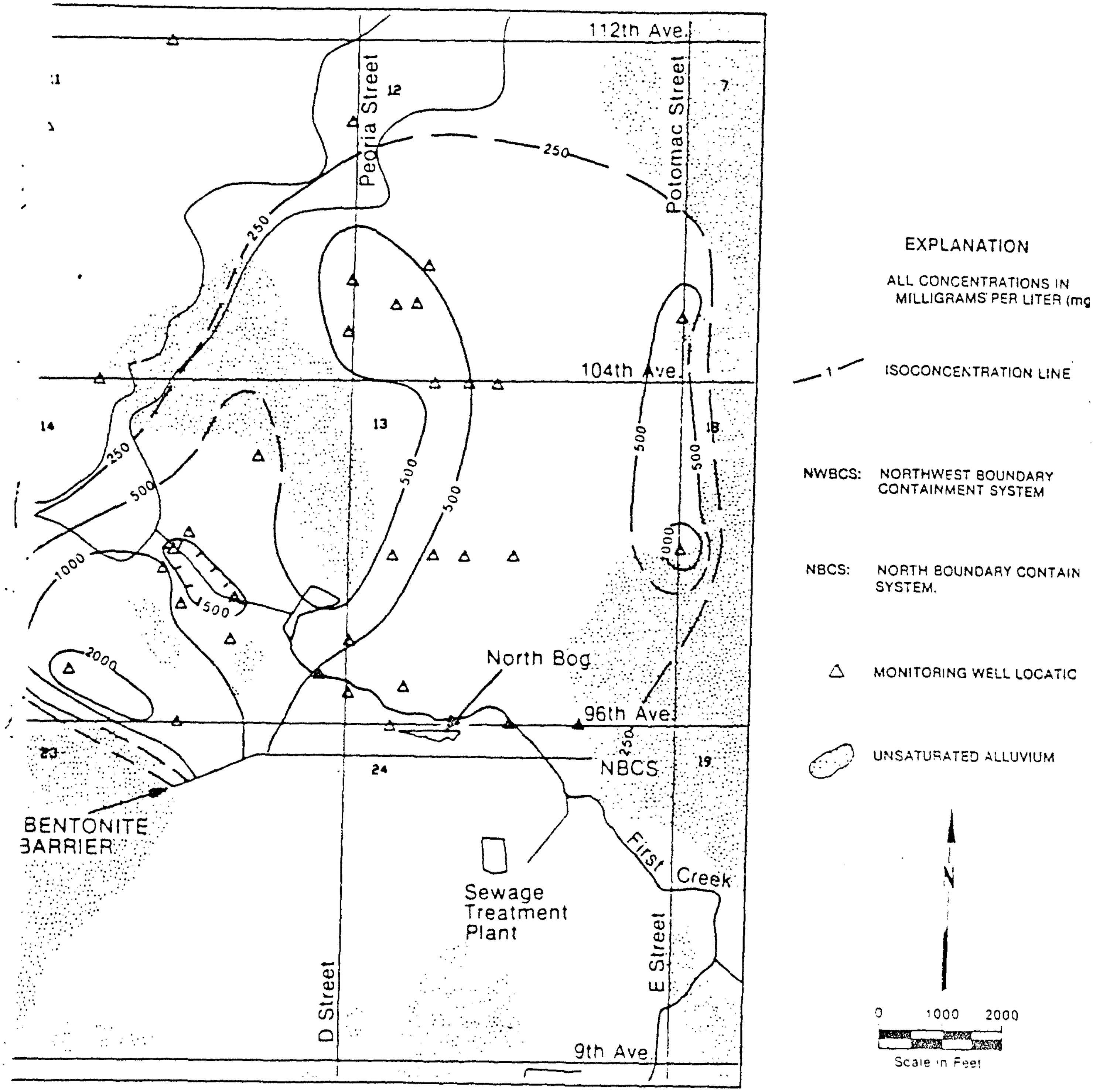


Figure F-45
SULFATE CONCENTRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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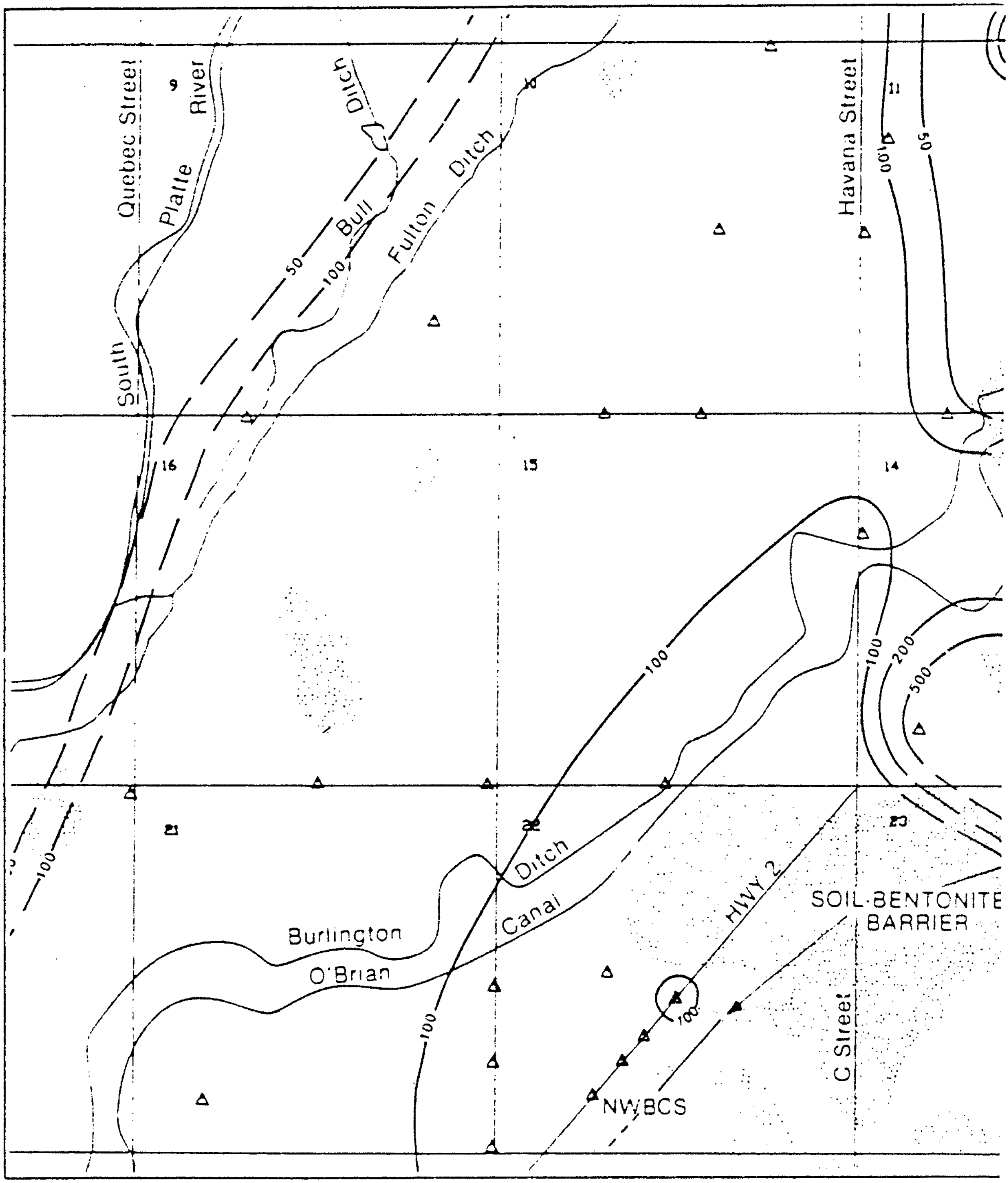
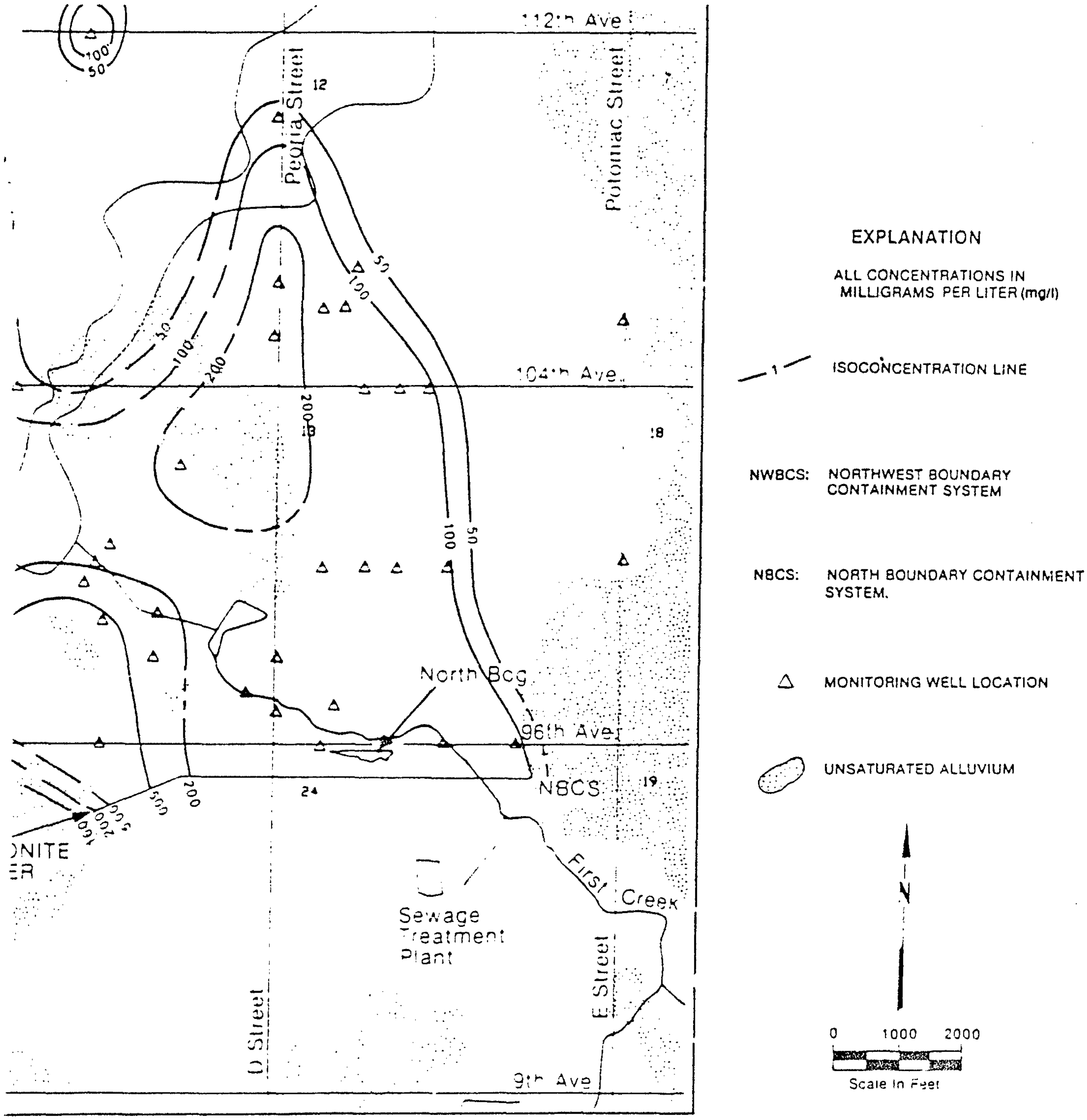


Figure F-46
CALCIUM CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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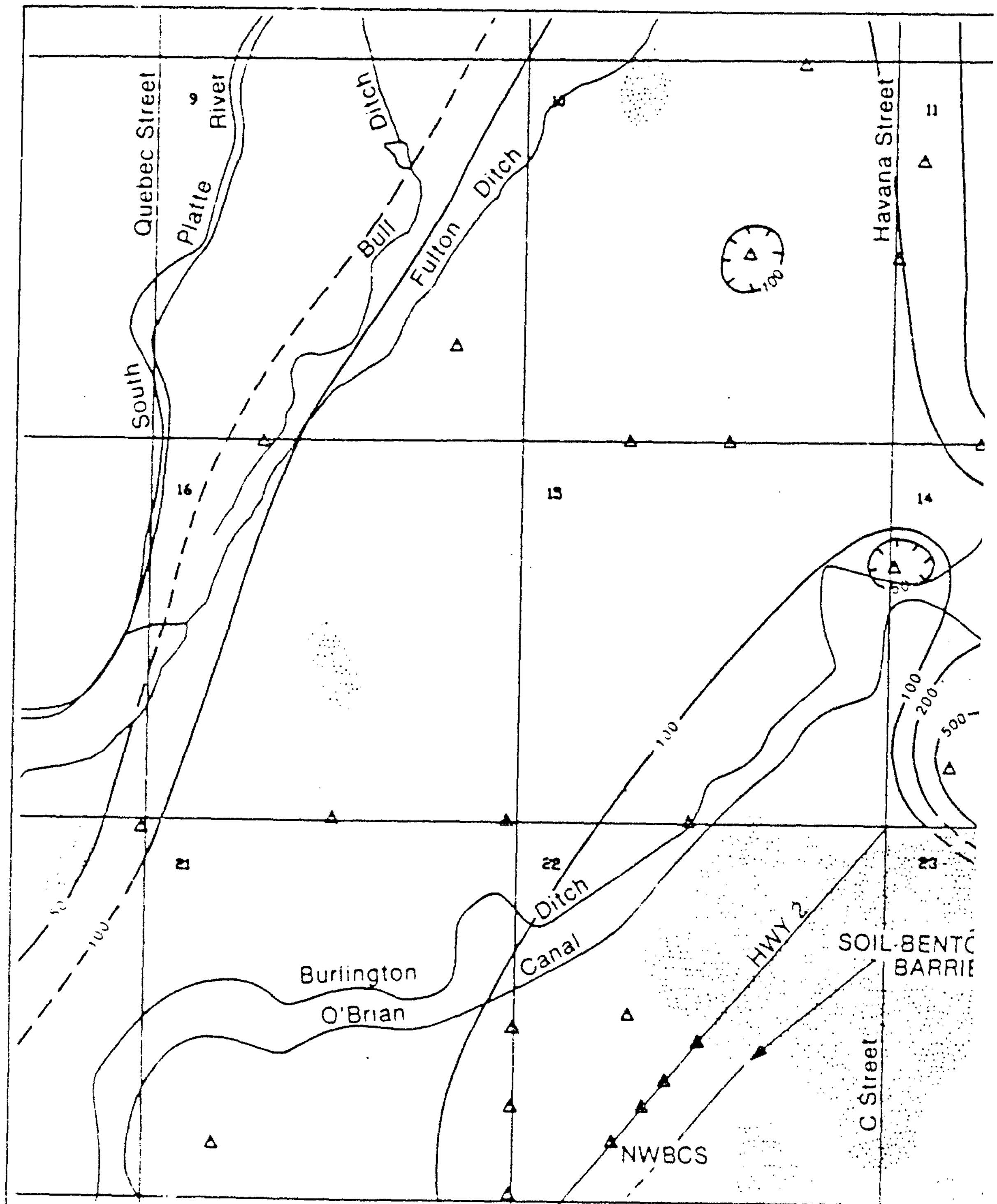
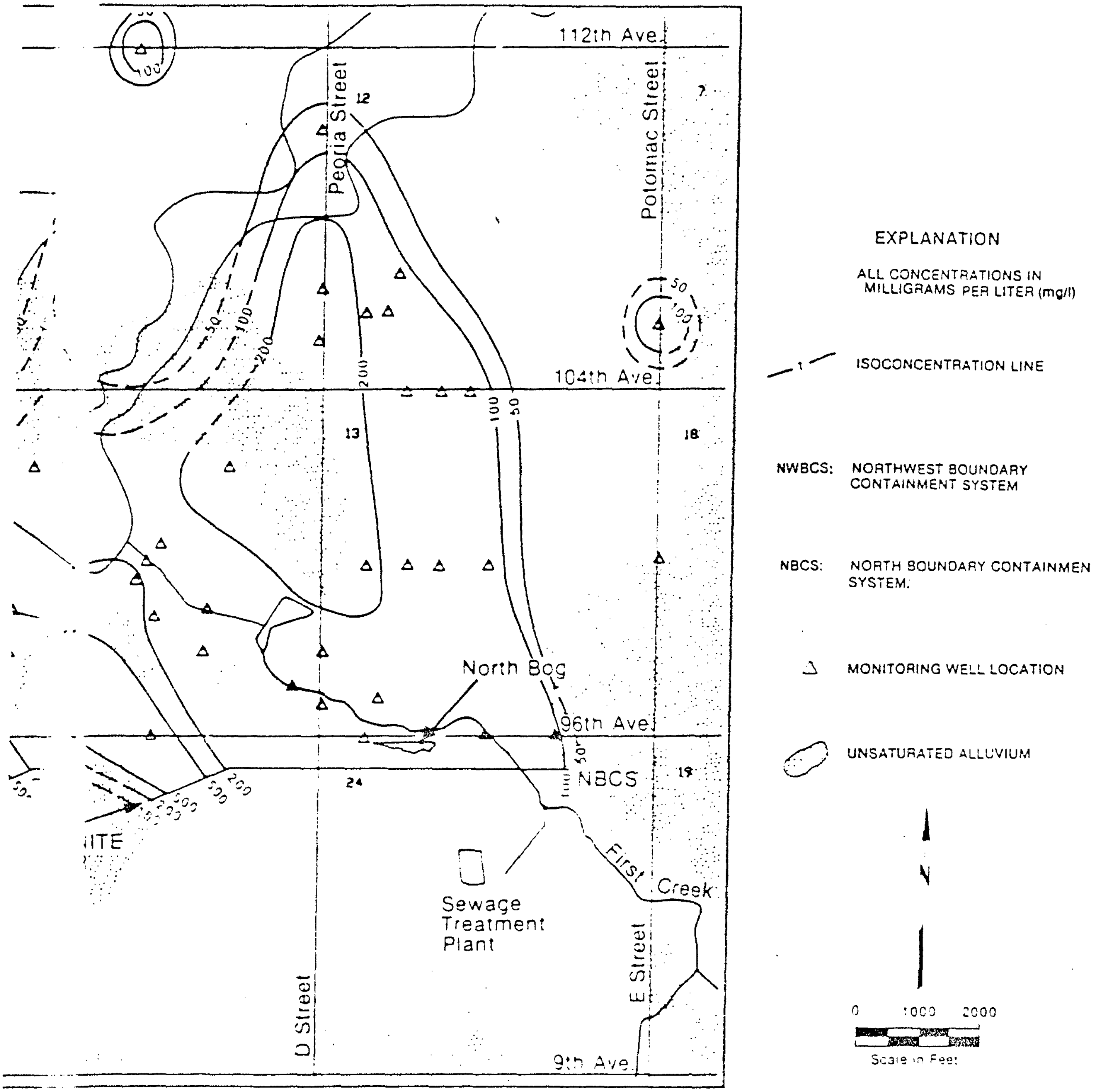


Figure F-47
CALCIUM CONCENTRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



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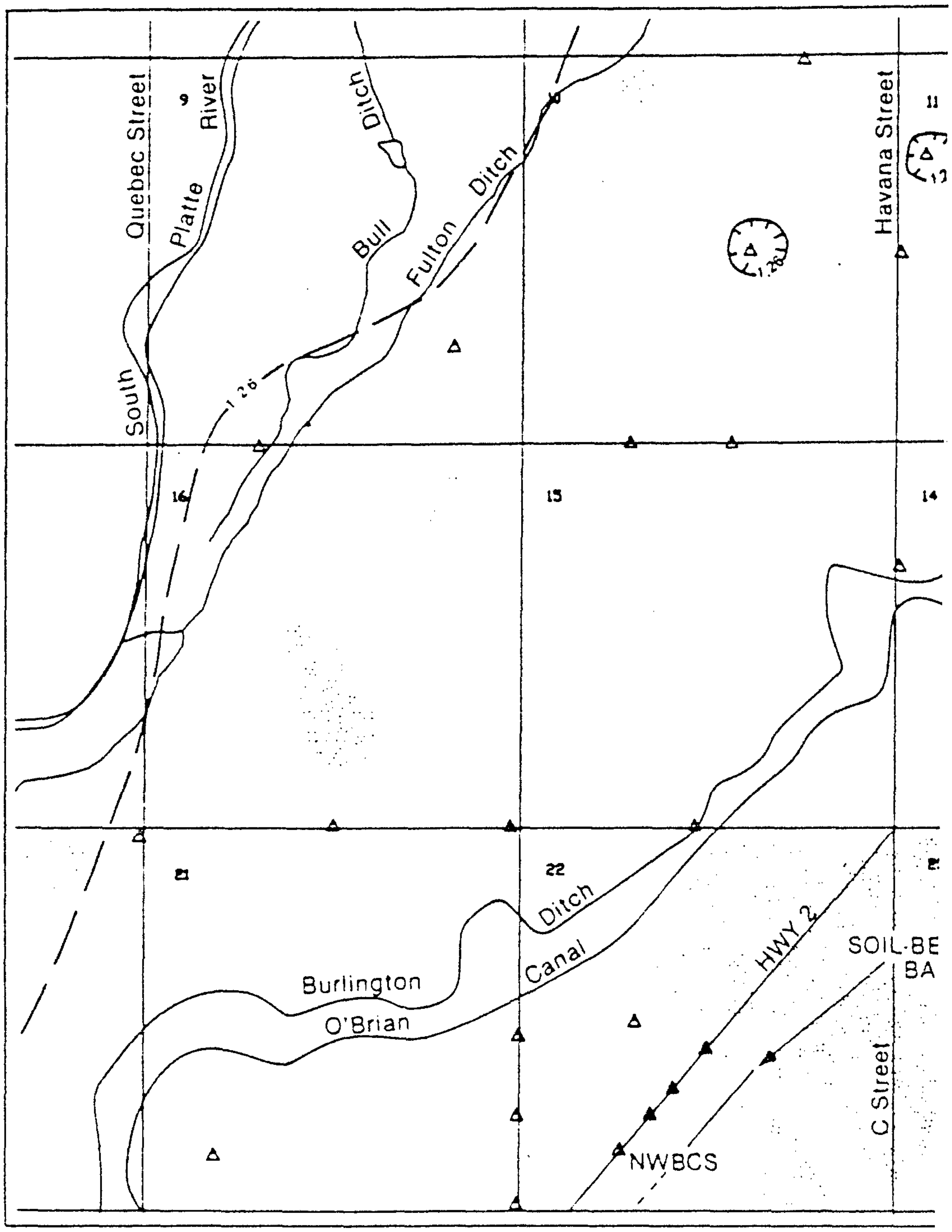
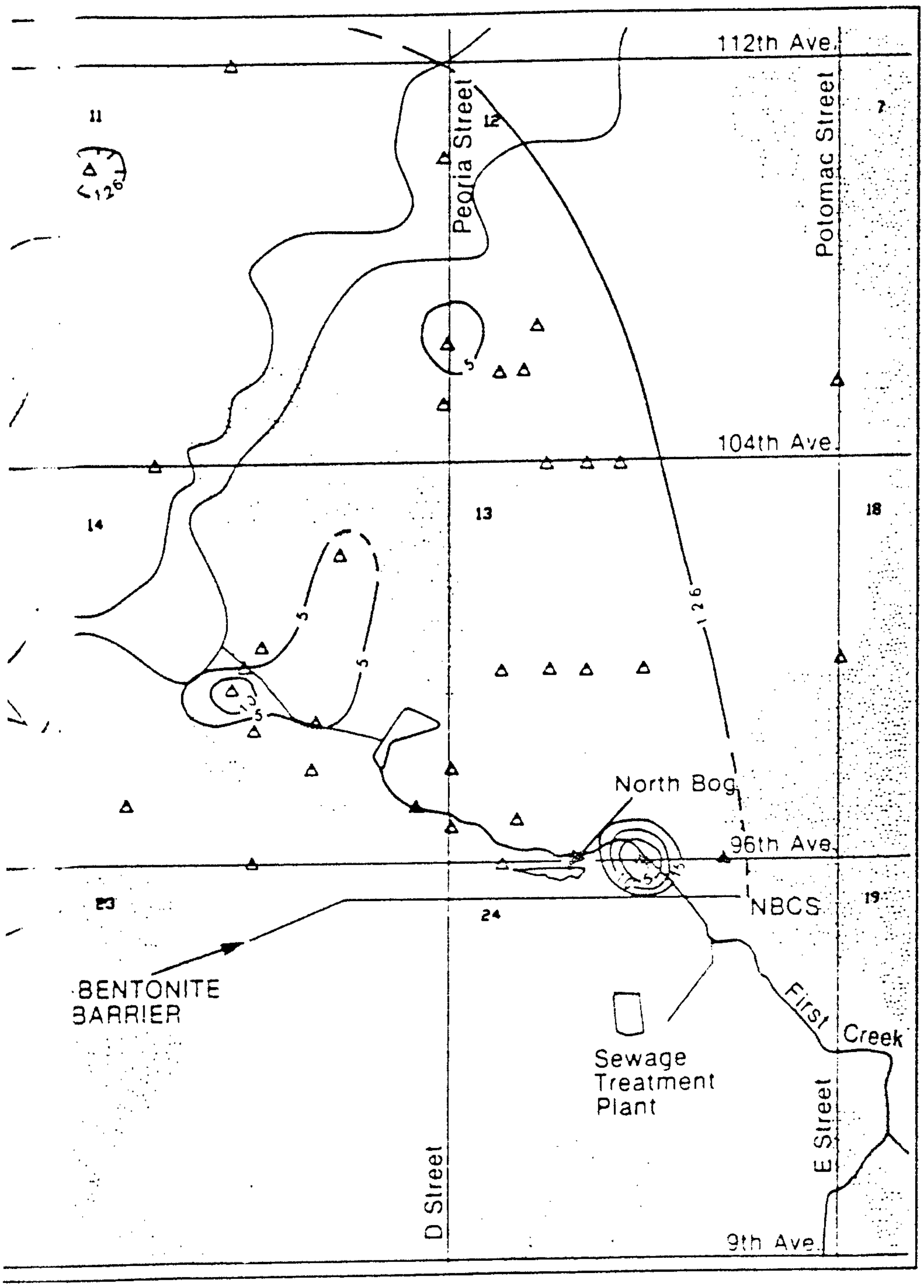


Figure F-48
POTASSIUM CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



EXPLANATION

ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/l)

ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINME SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale In Feet

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For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

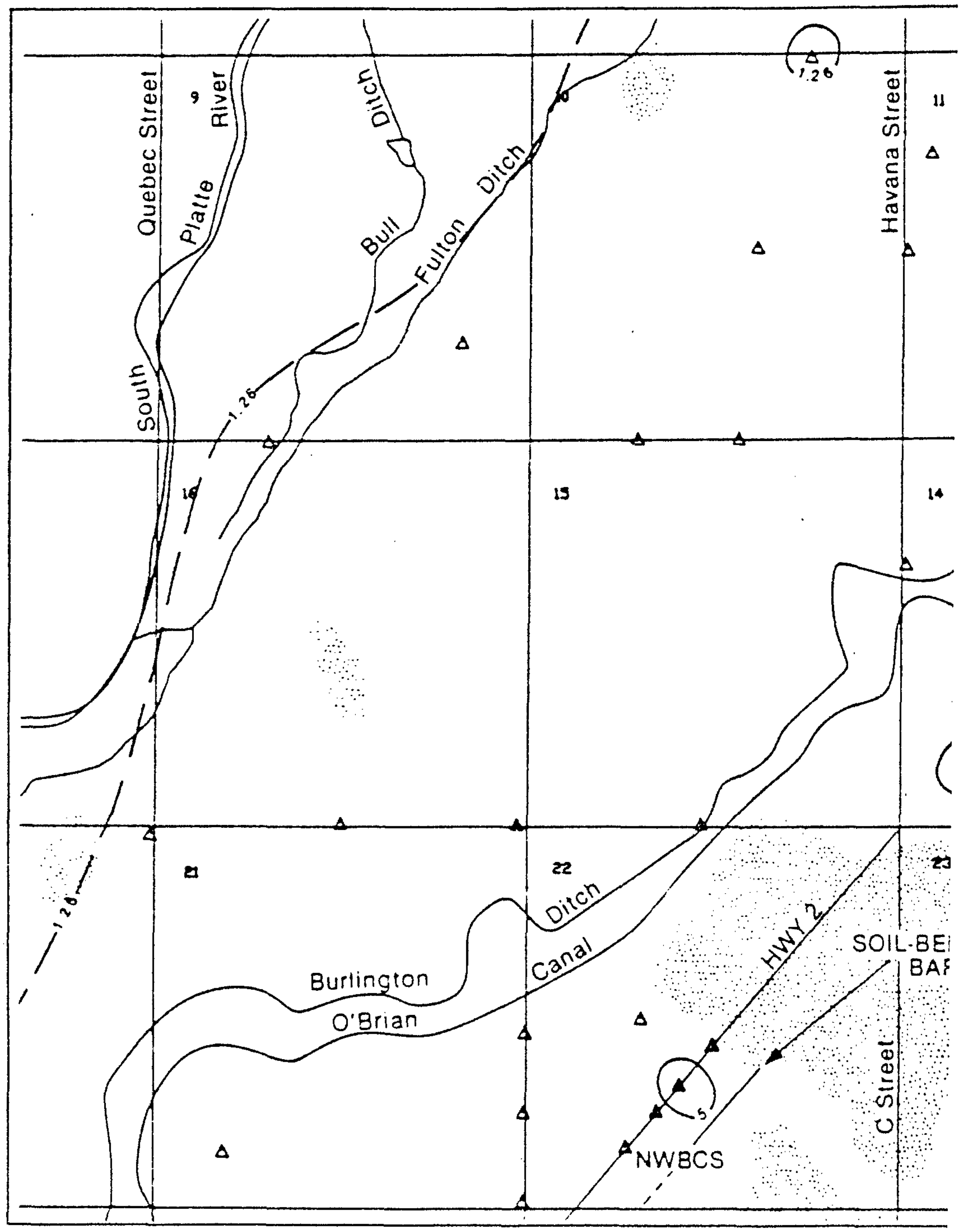
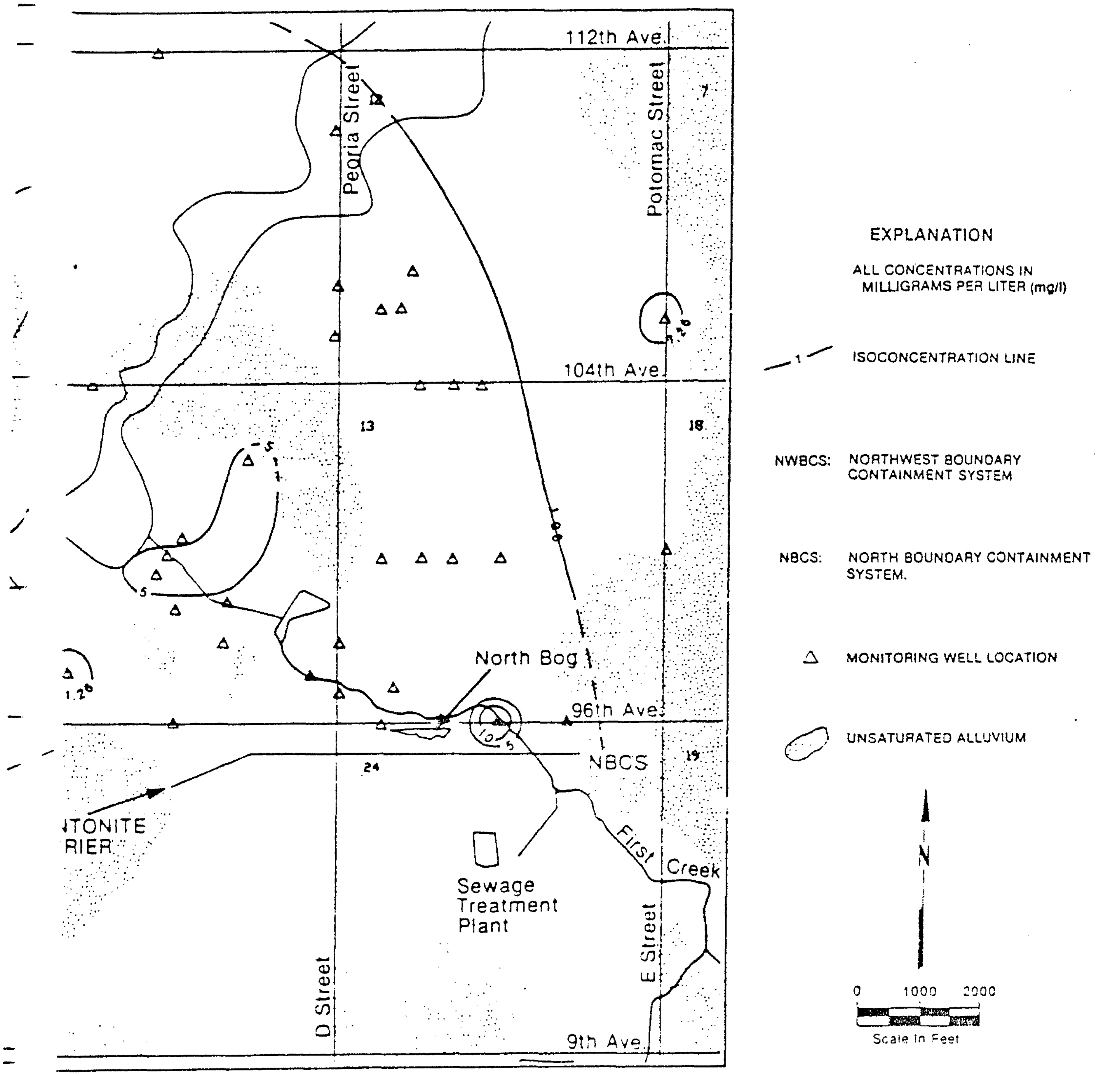


Figure F-49
POTASSIUM CONCENTRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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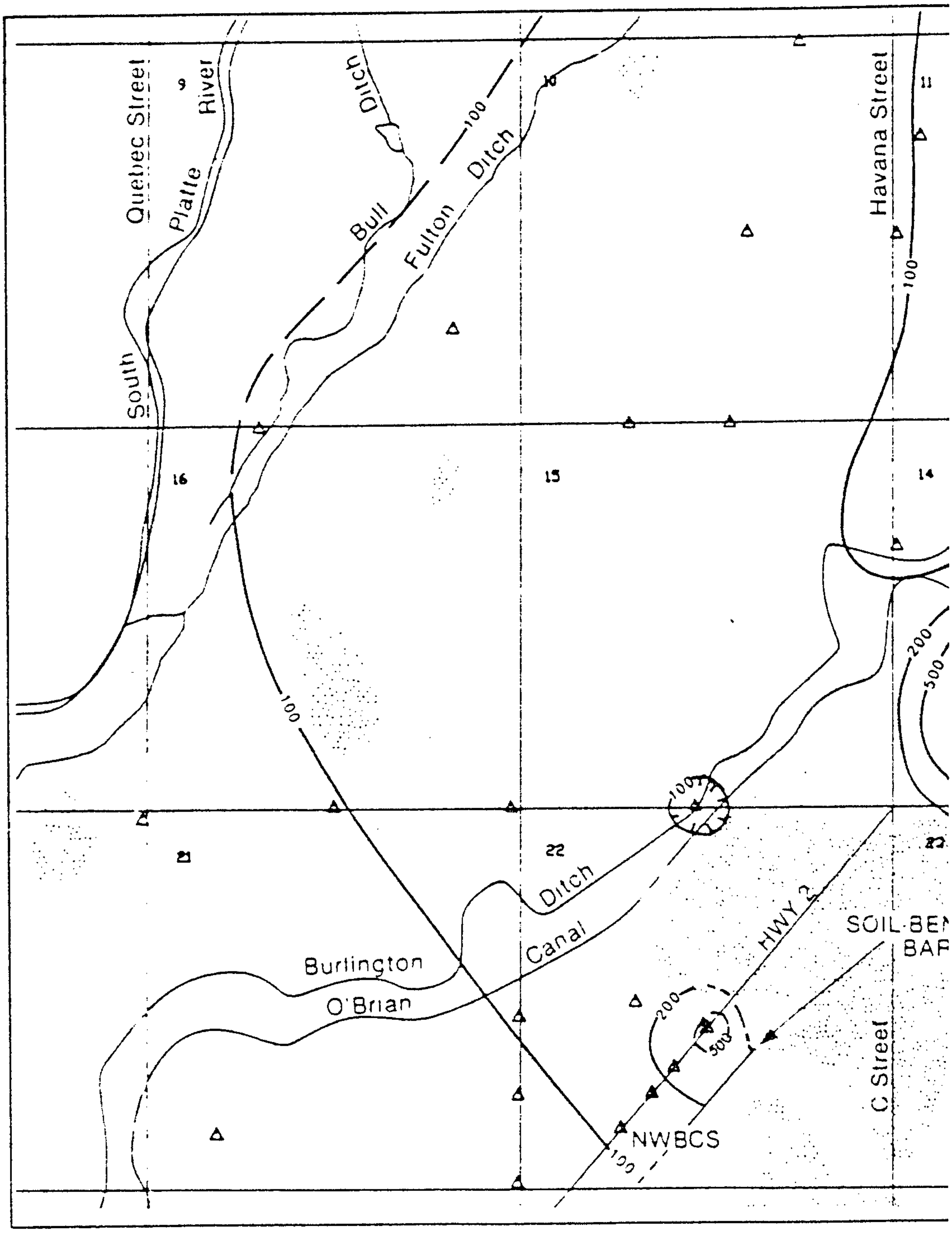
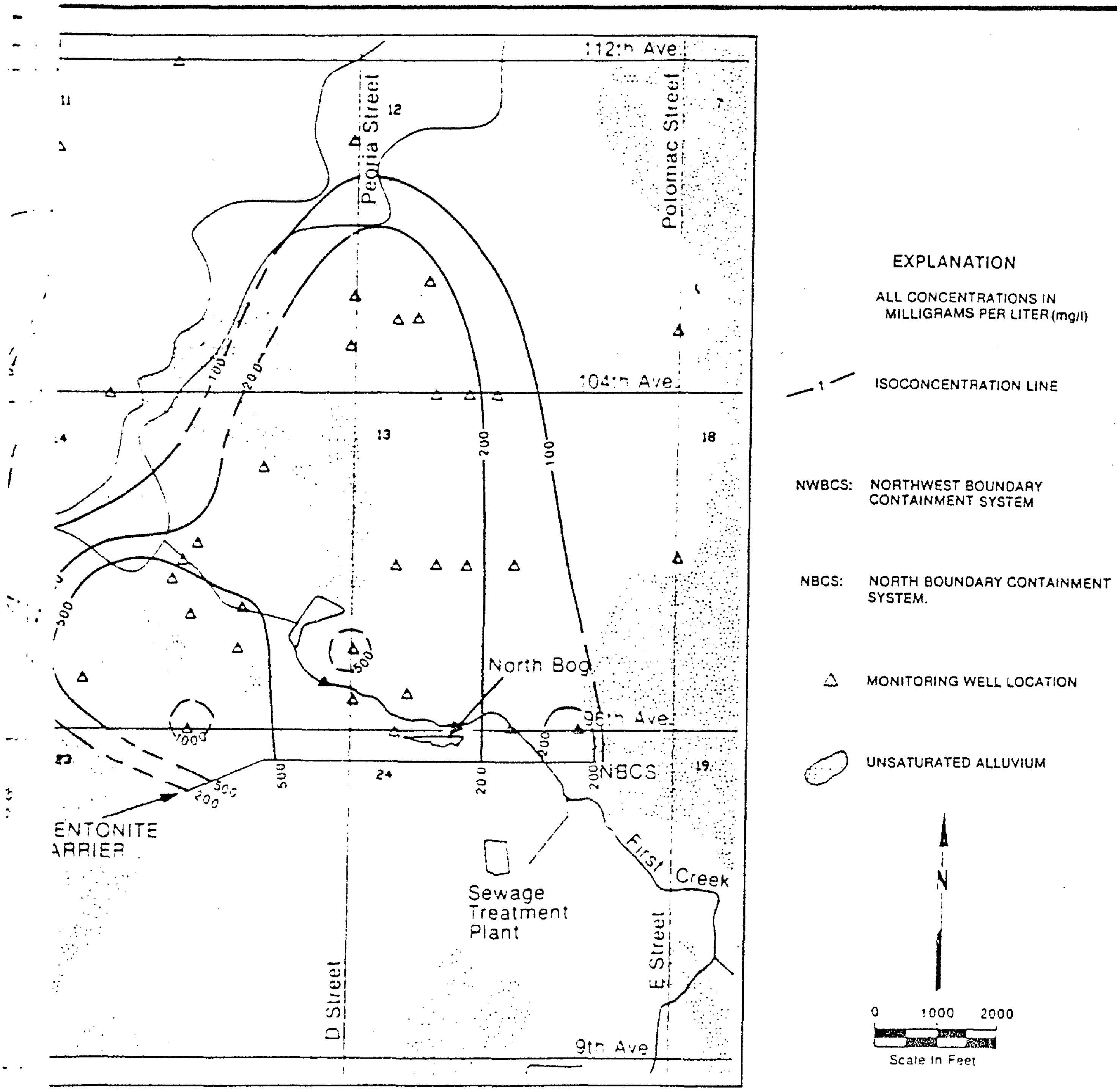


Figure F-50
SODIUM CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE, 1988



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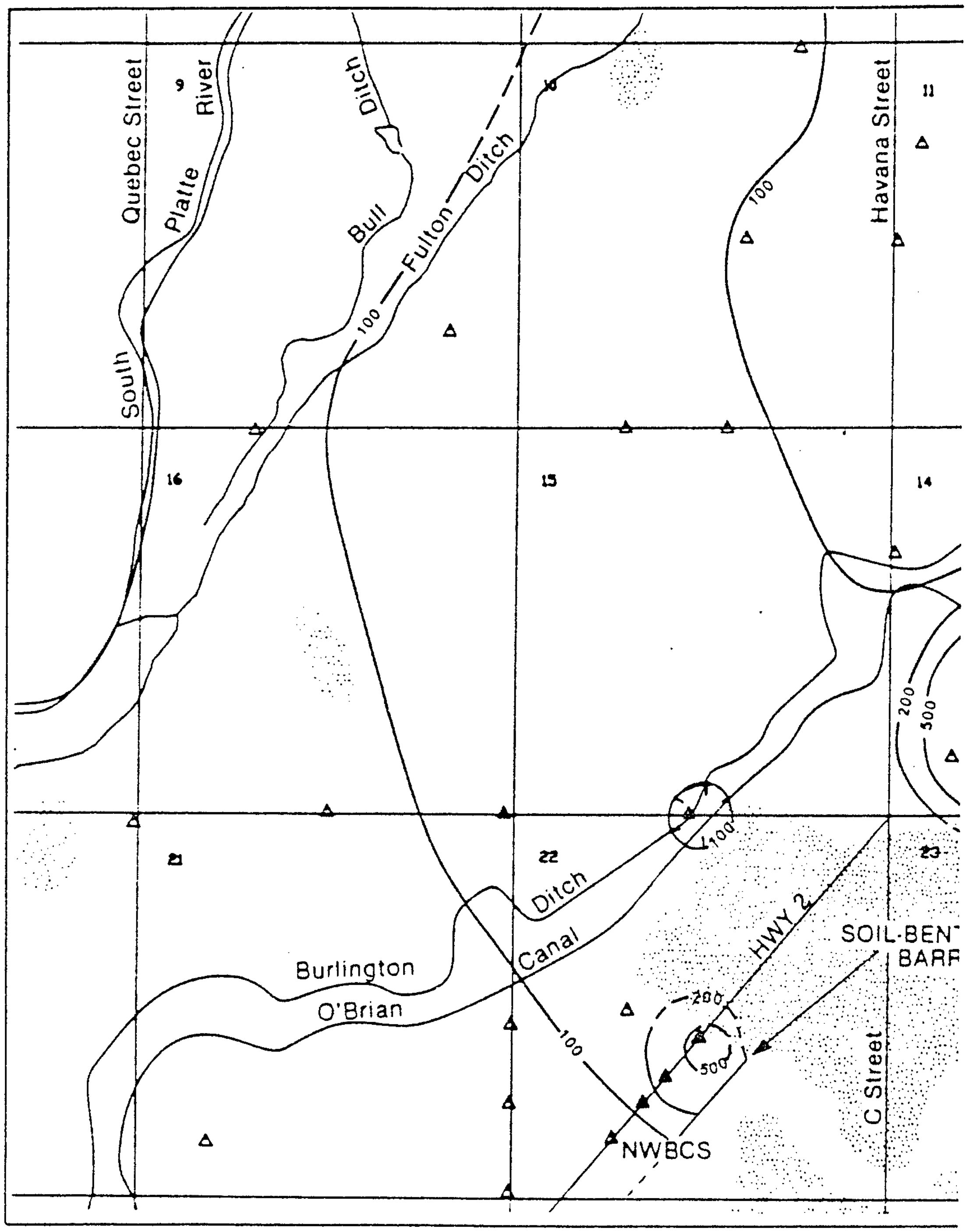
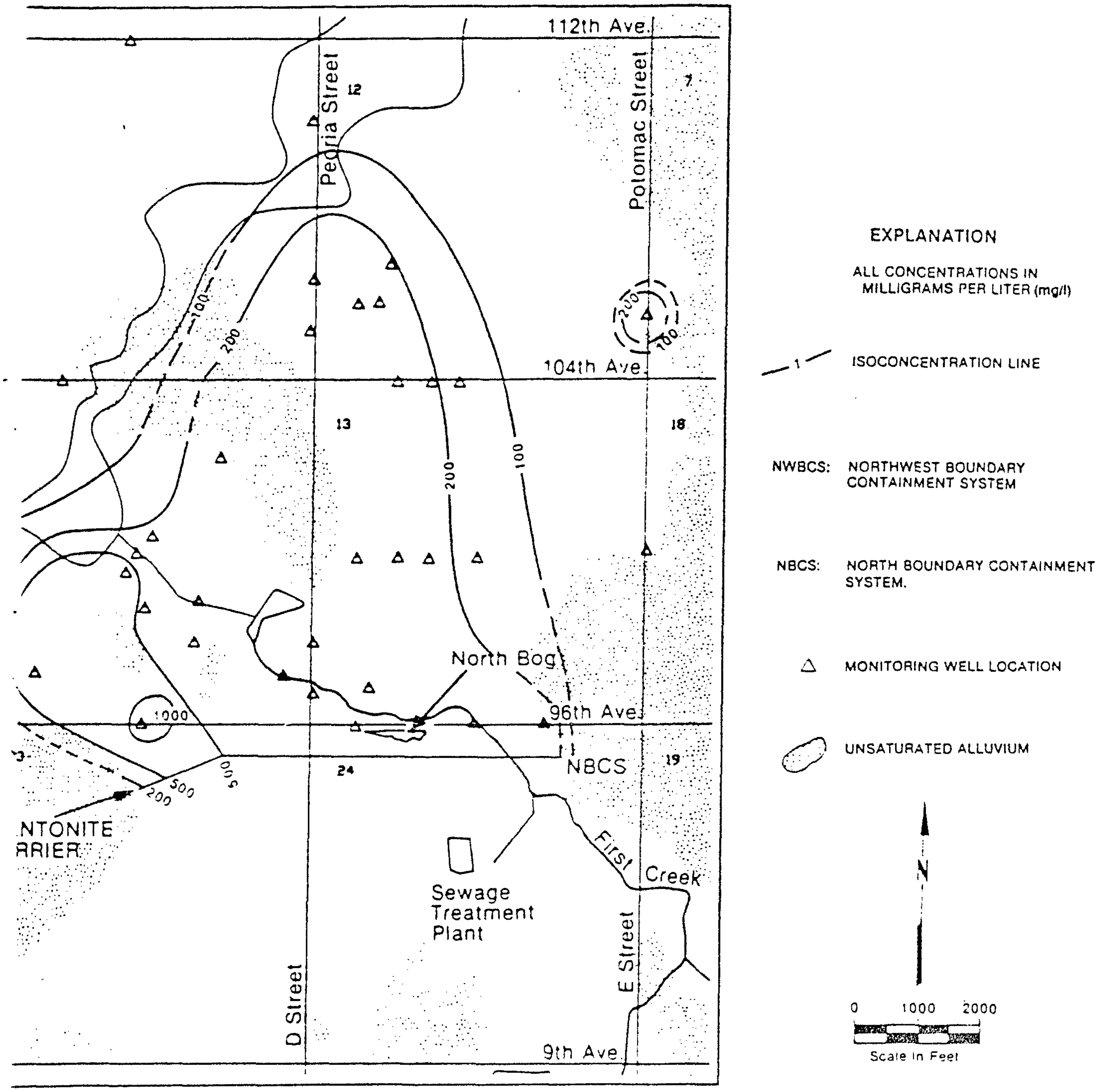


Figure F-51
SODIUM CONCENTRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



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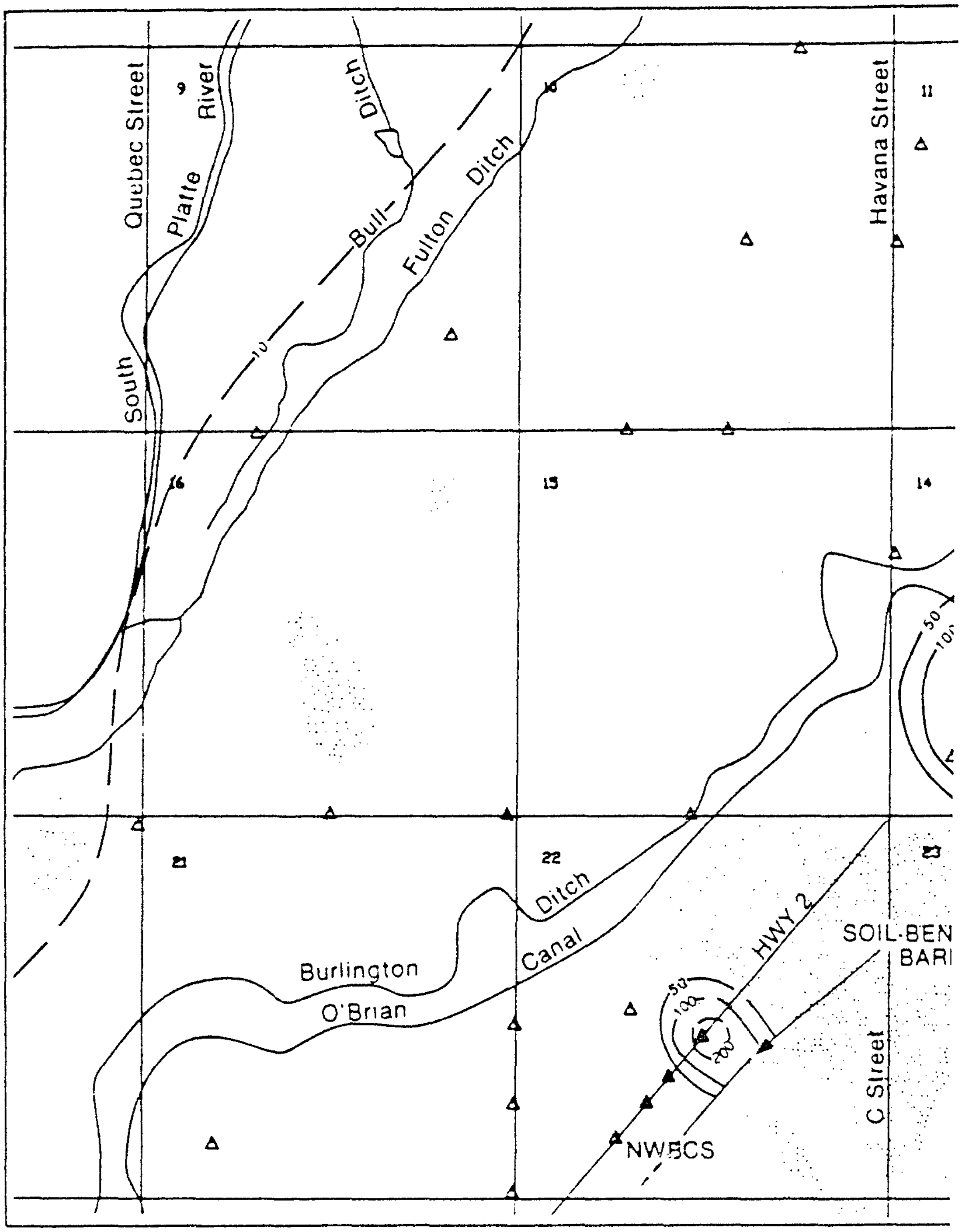
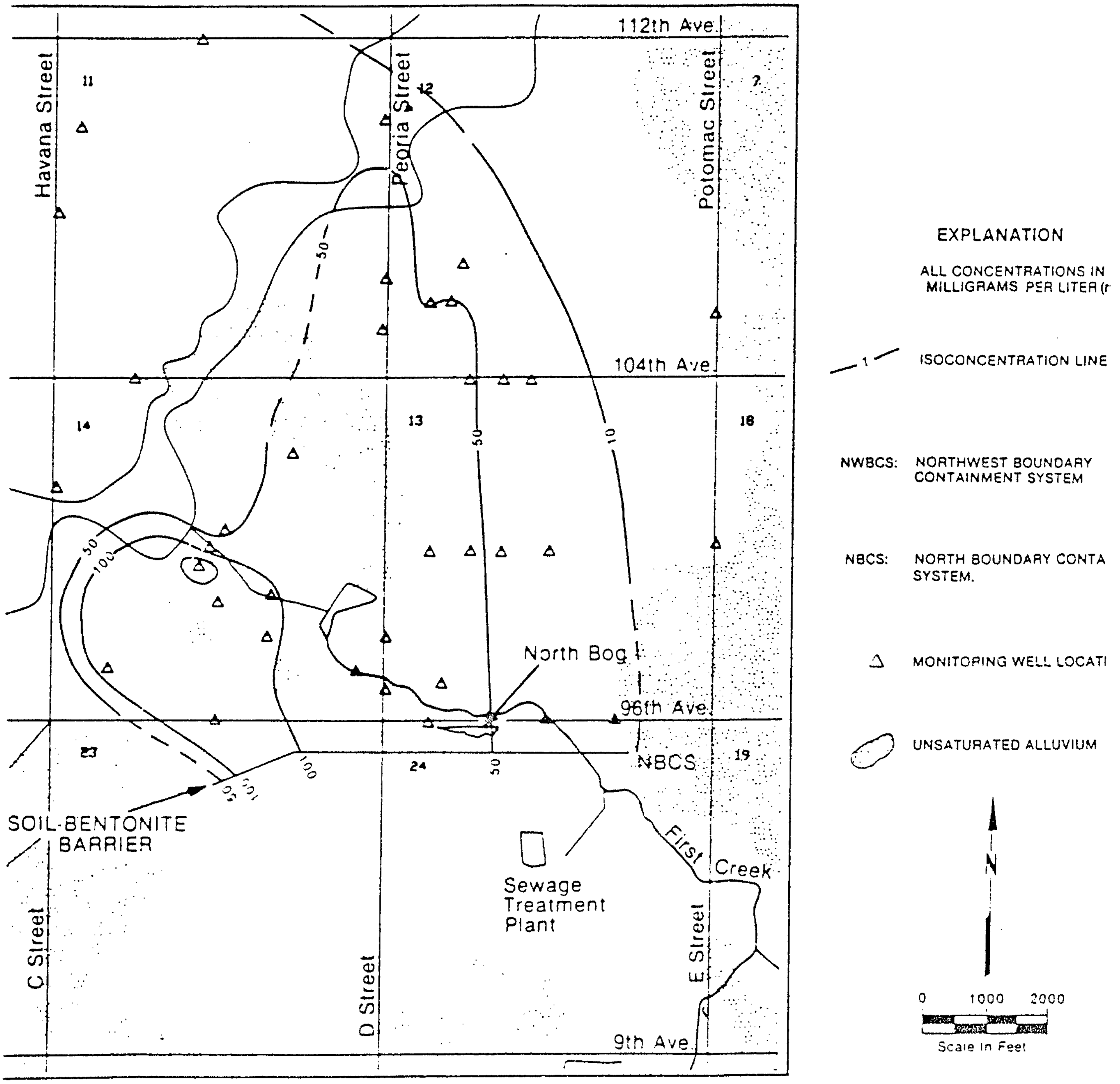


Figure F-52
MAGNESIUM CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE, 1988



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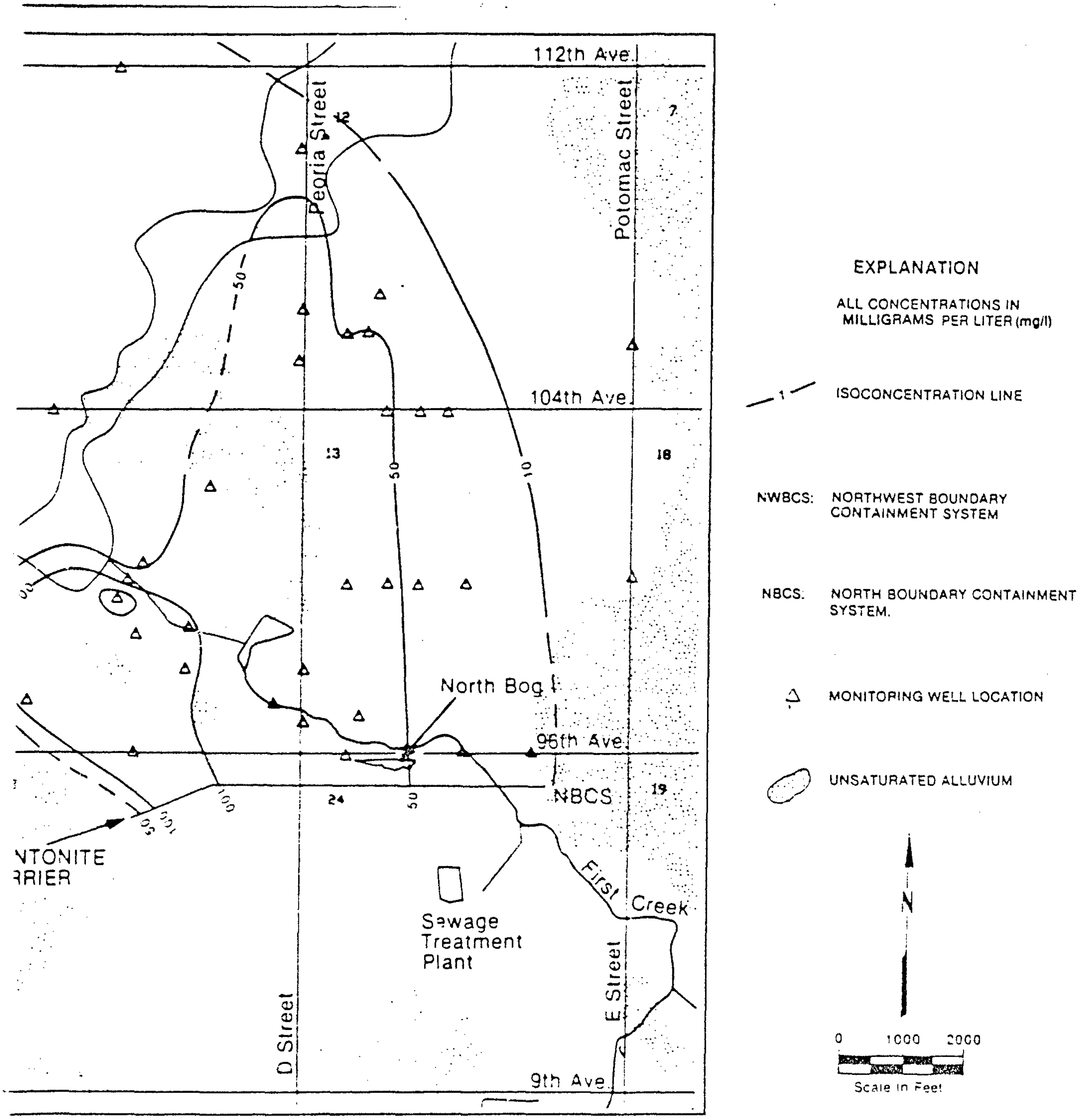

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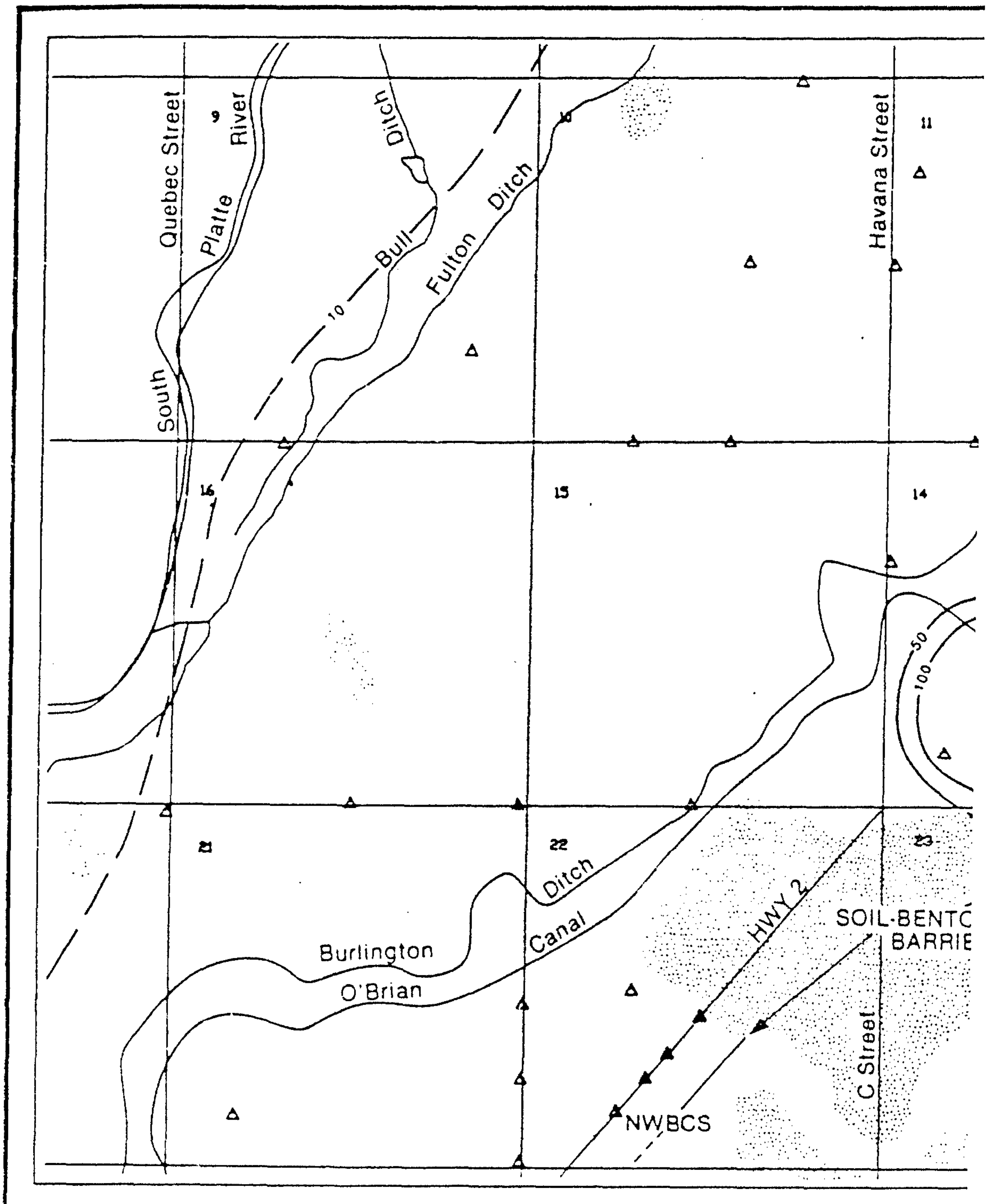
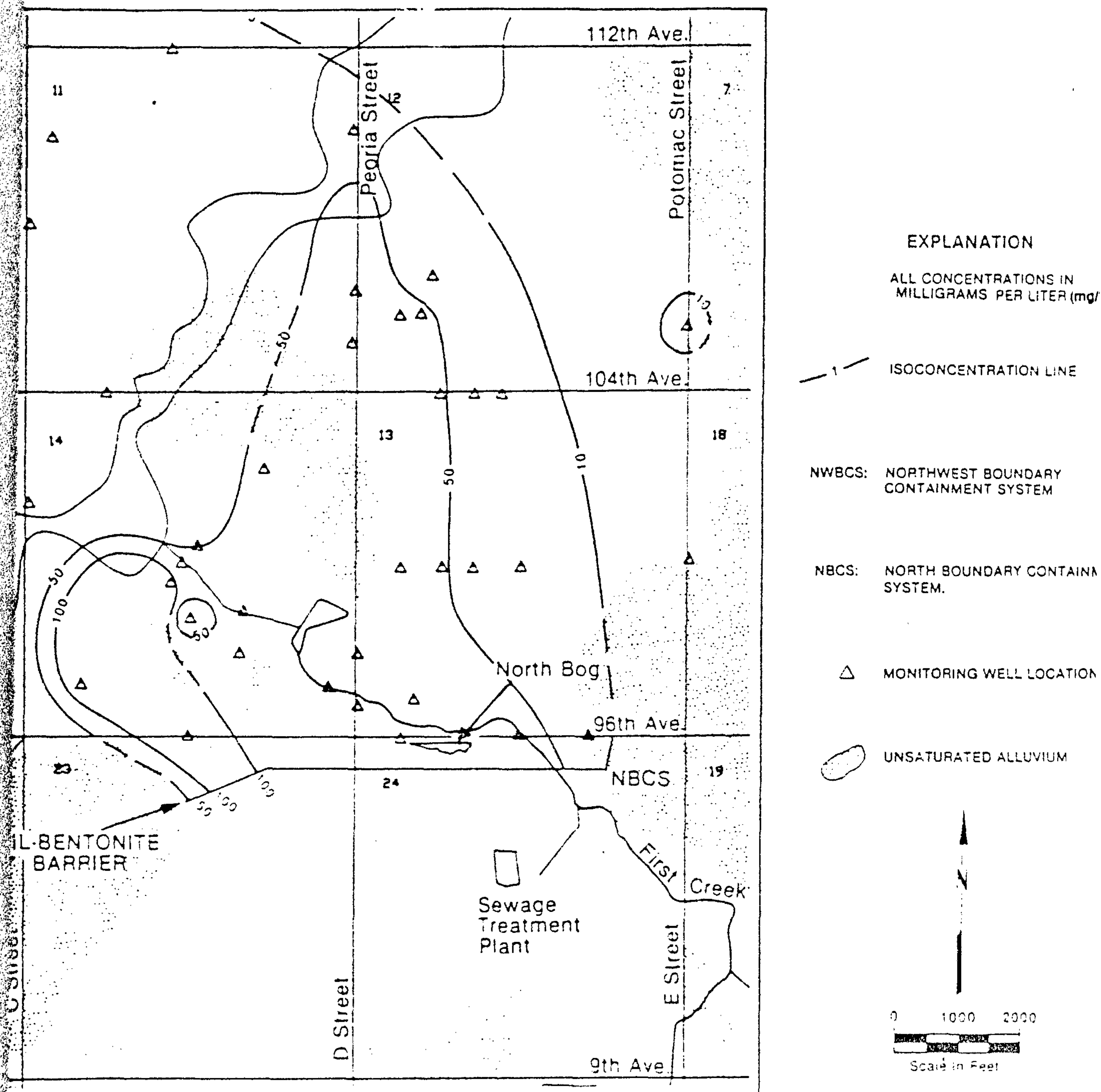


Figure F-53
MAGNESIUM CONCENTRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



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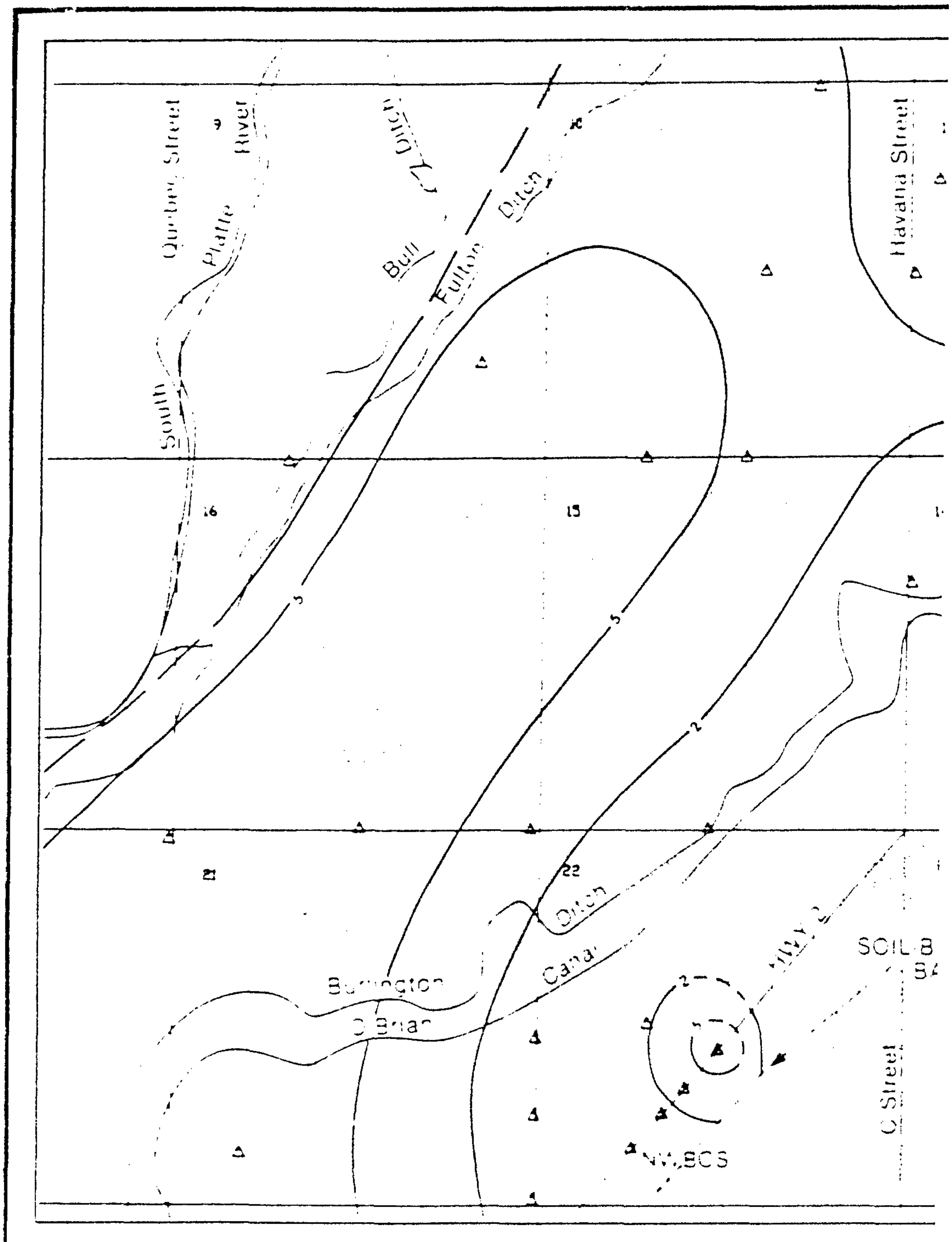
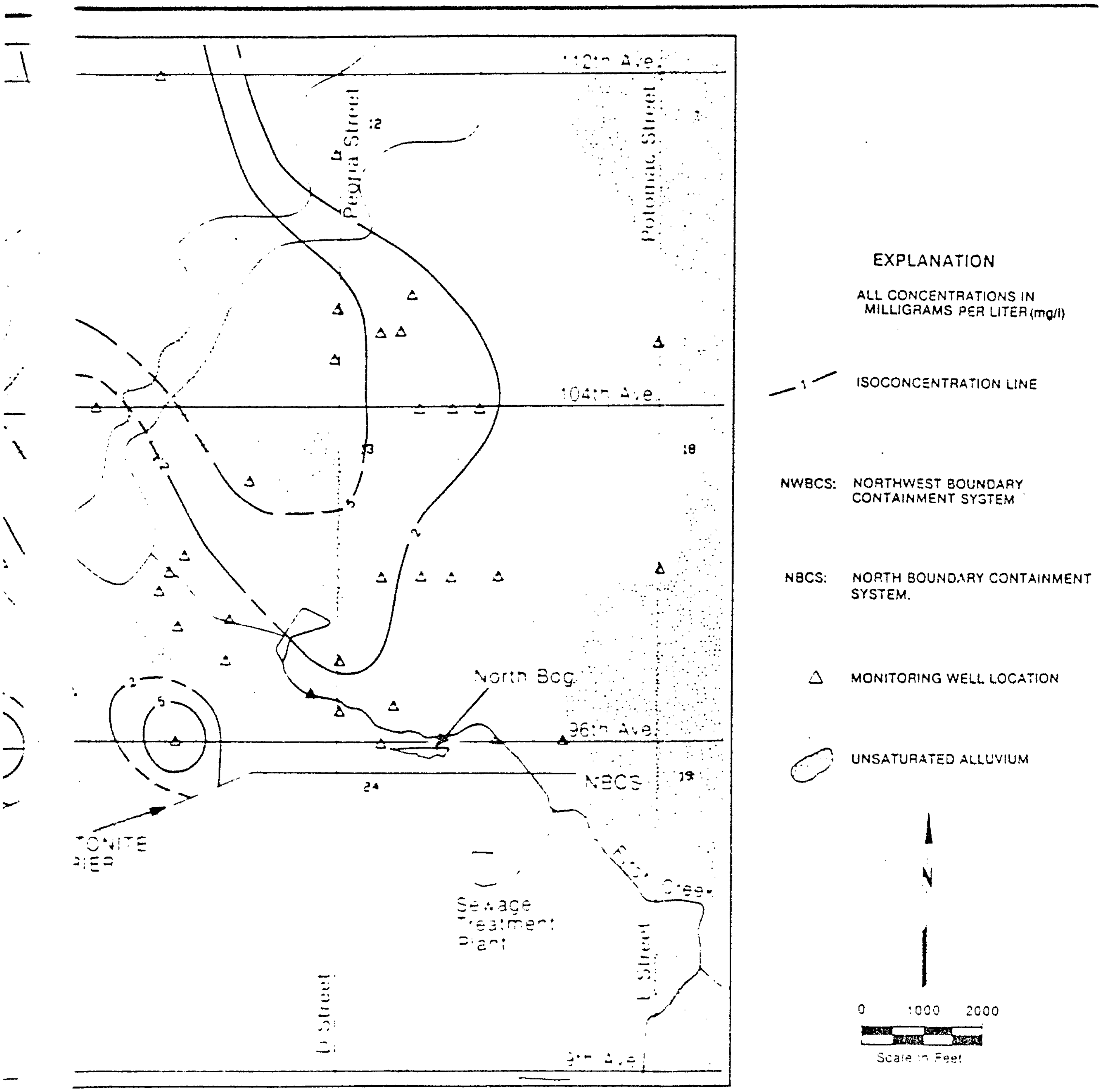


Figure F-54
NITRATE CONCENTRATION DISTRIBUTION, mg/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER



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For Rocky Mountain Arsenal

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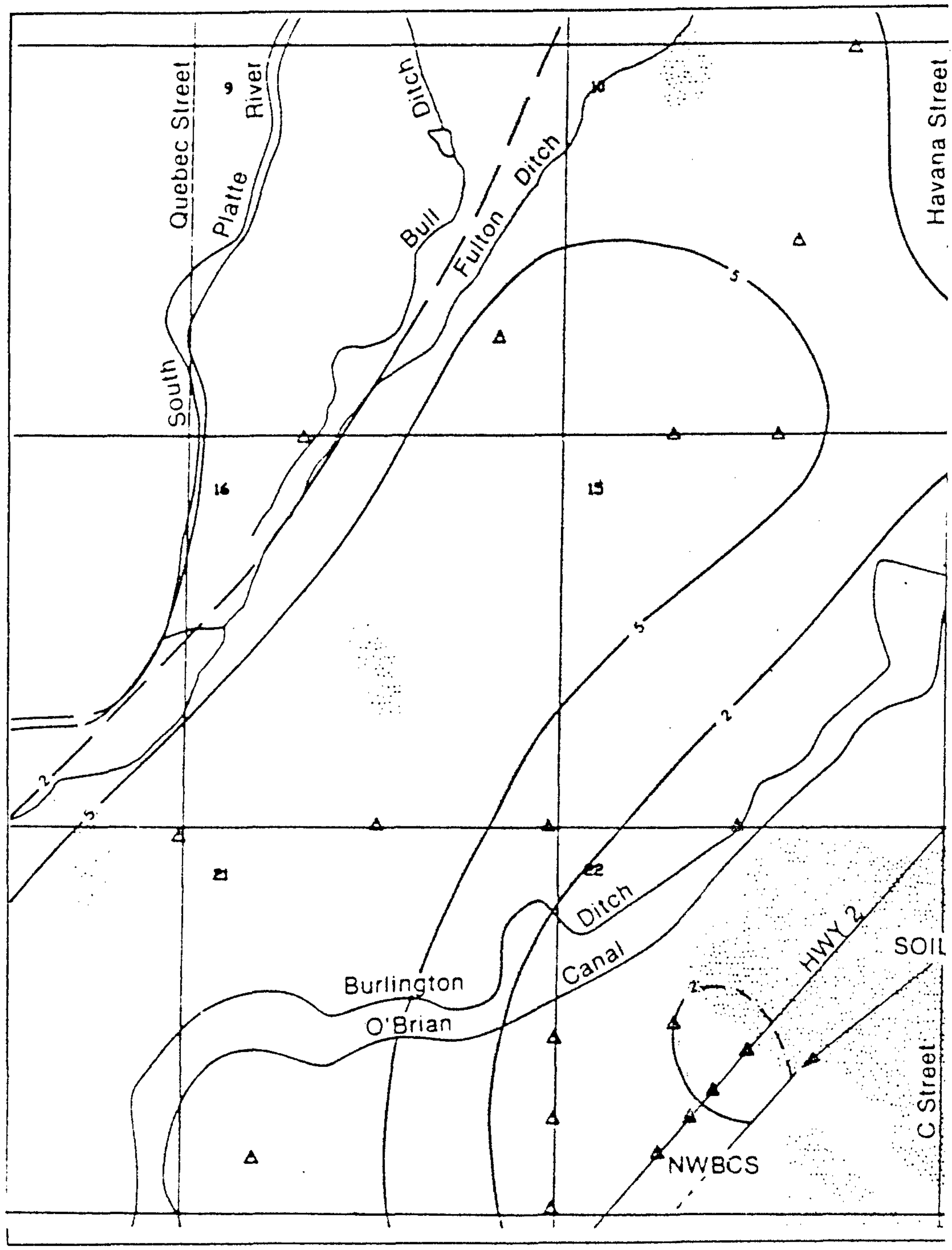
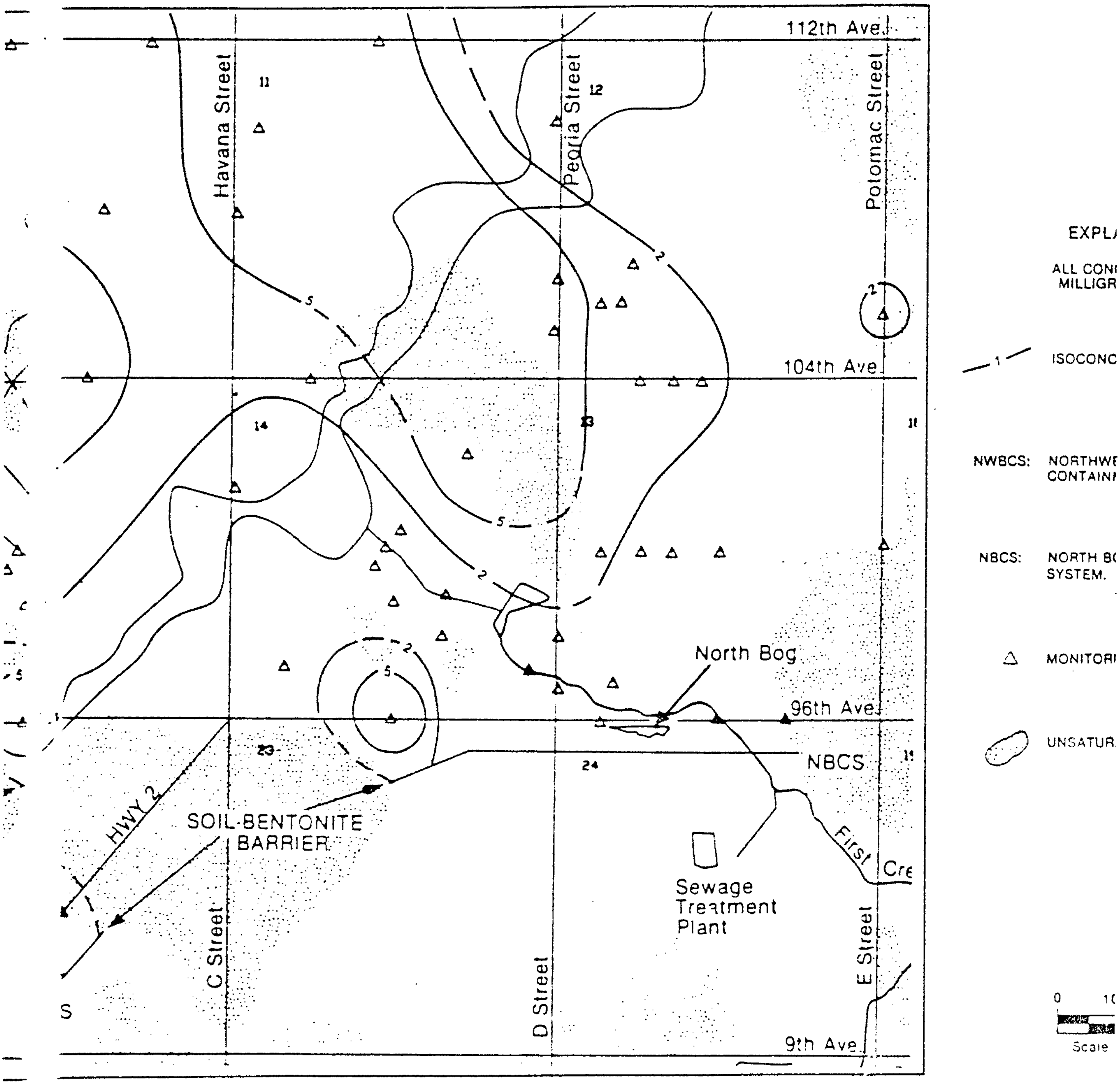


Figure F-55
NITRATE CONCETRATION DISTRIBUTION, mg/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER



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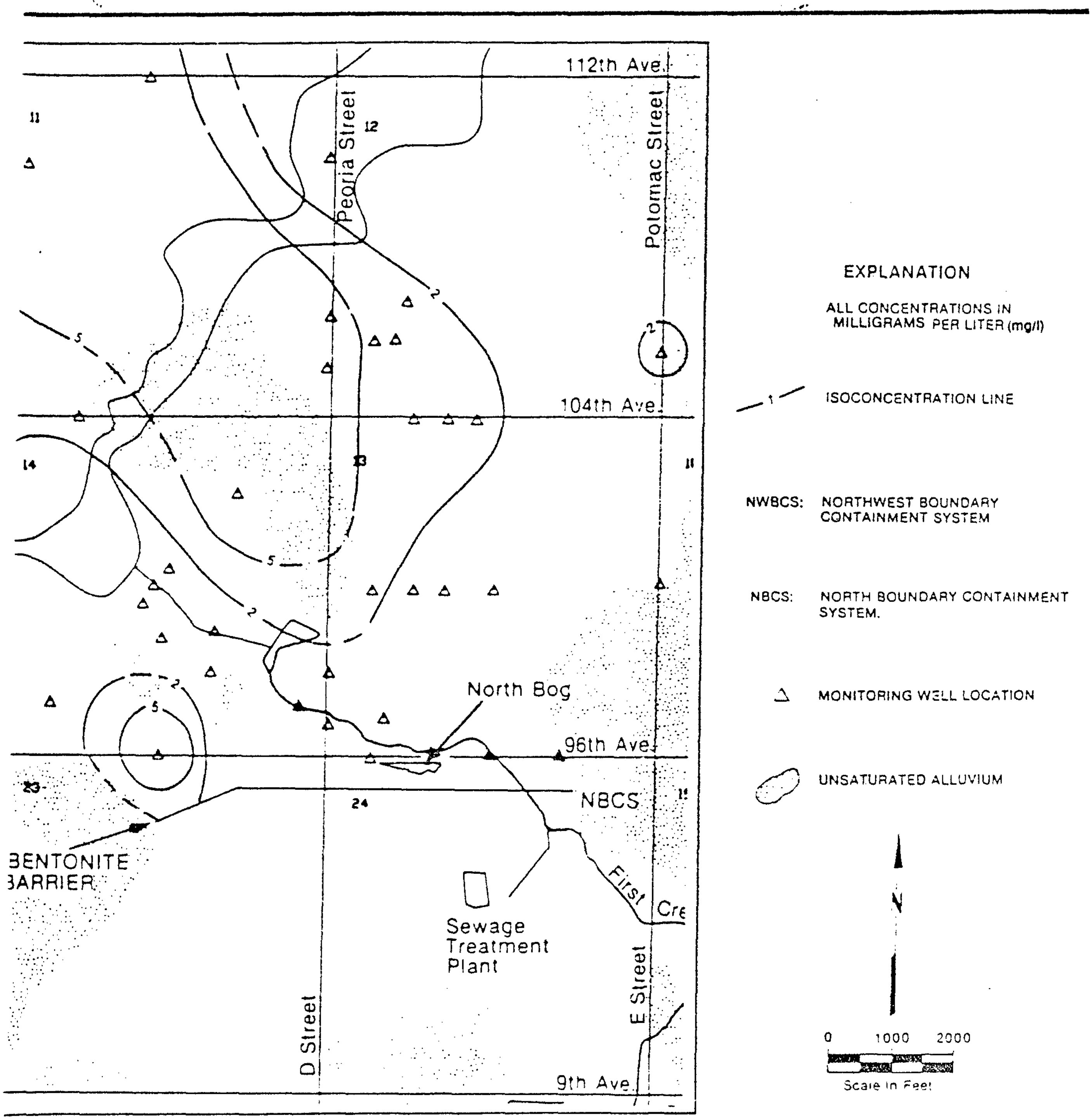
Aberdeen Proving Ground,



Prepared for:
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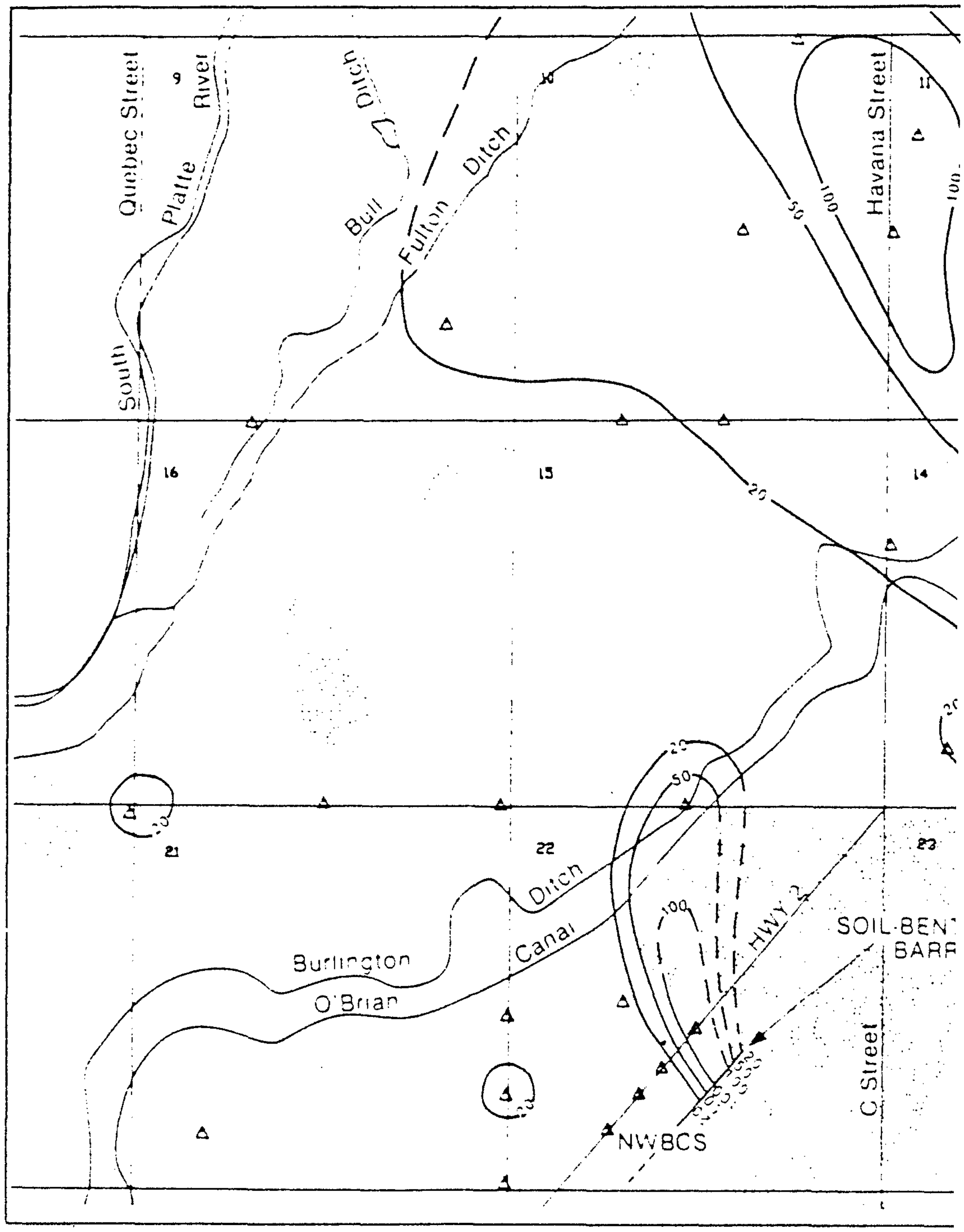
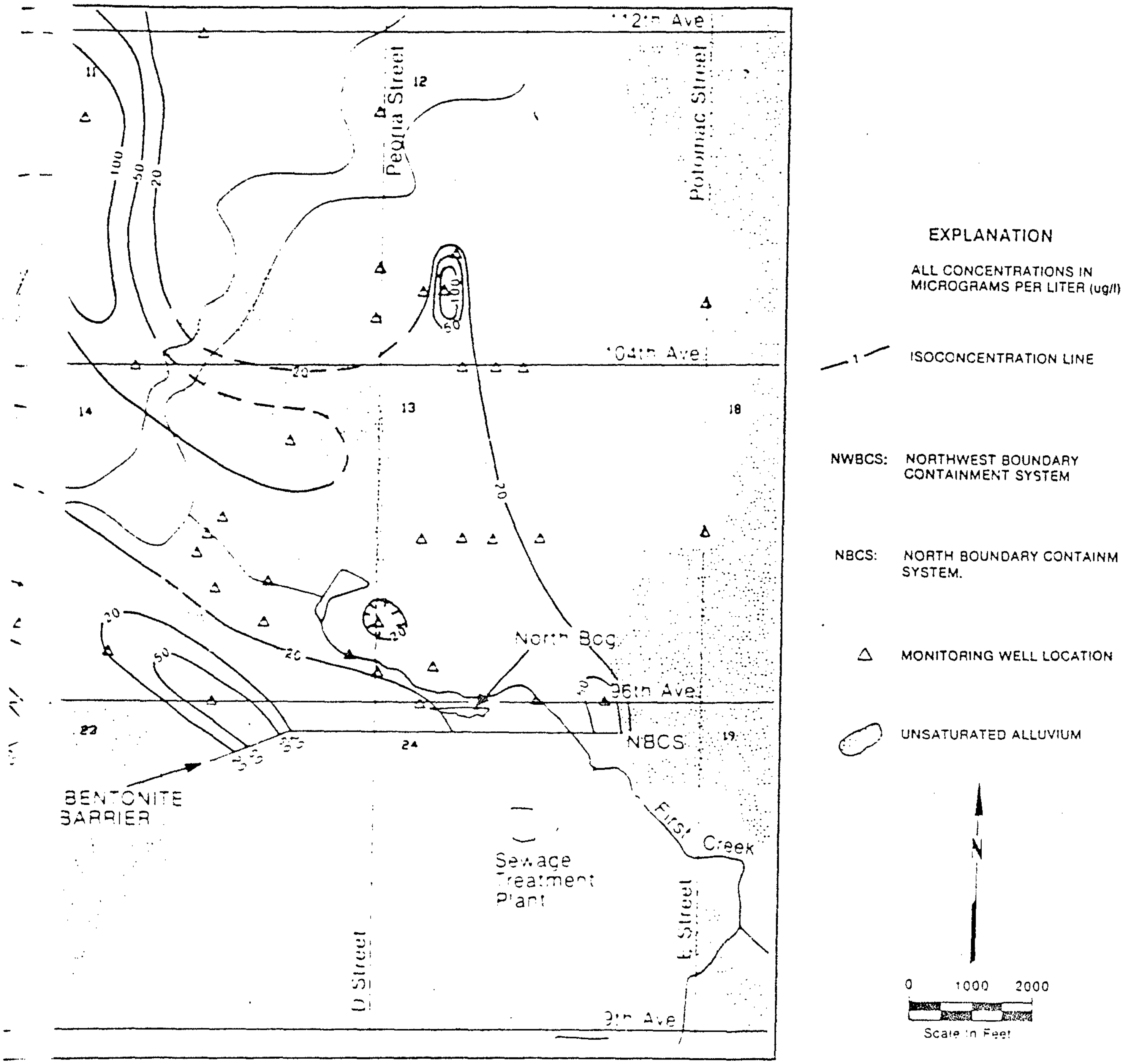


Figure F-56

ZINC CONCENTRATION DISTRIBUTION, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



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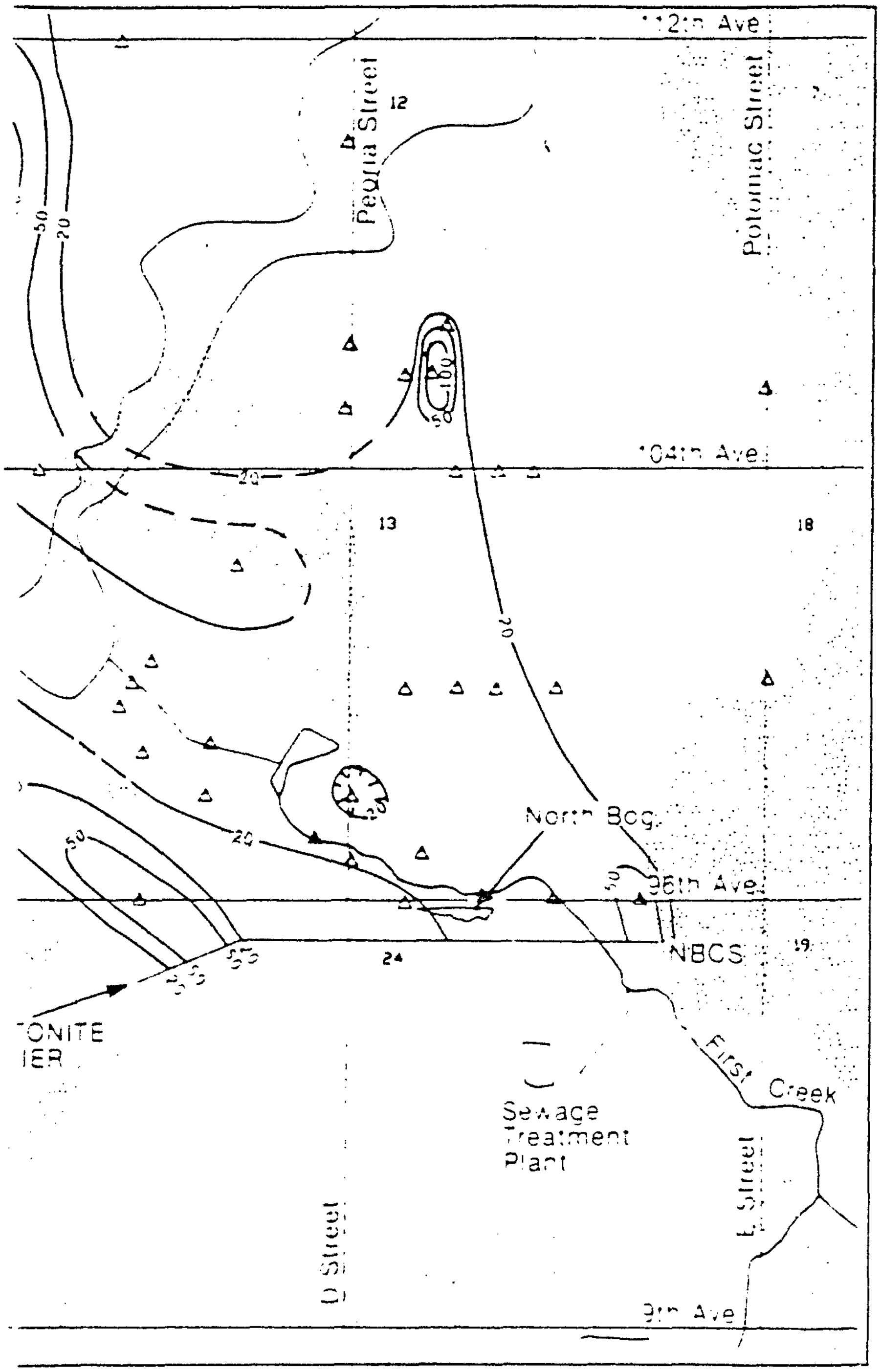
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland



EXPLANATION

ALL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l)

ISOCONCENTRATION LINE

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale In Feet

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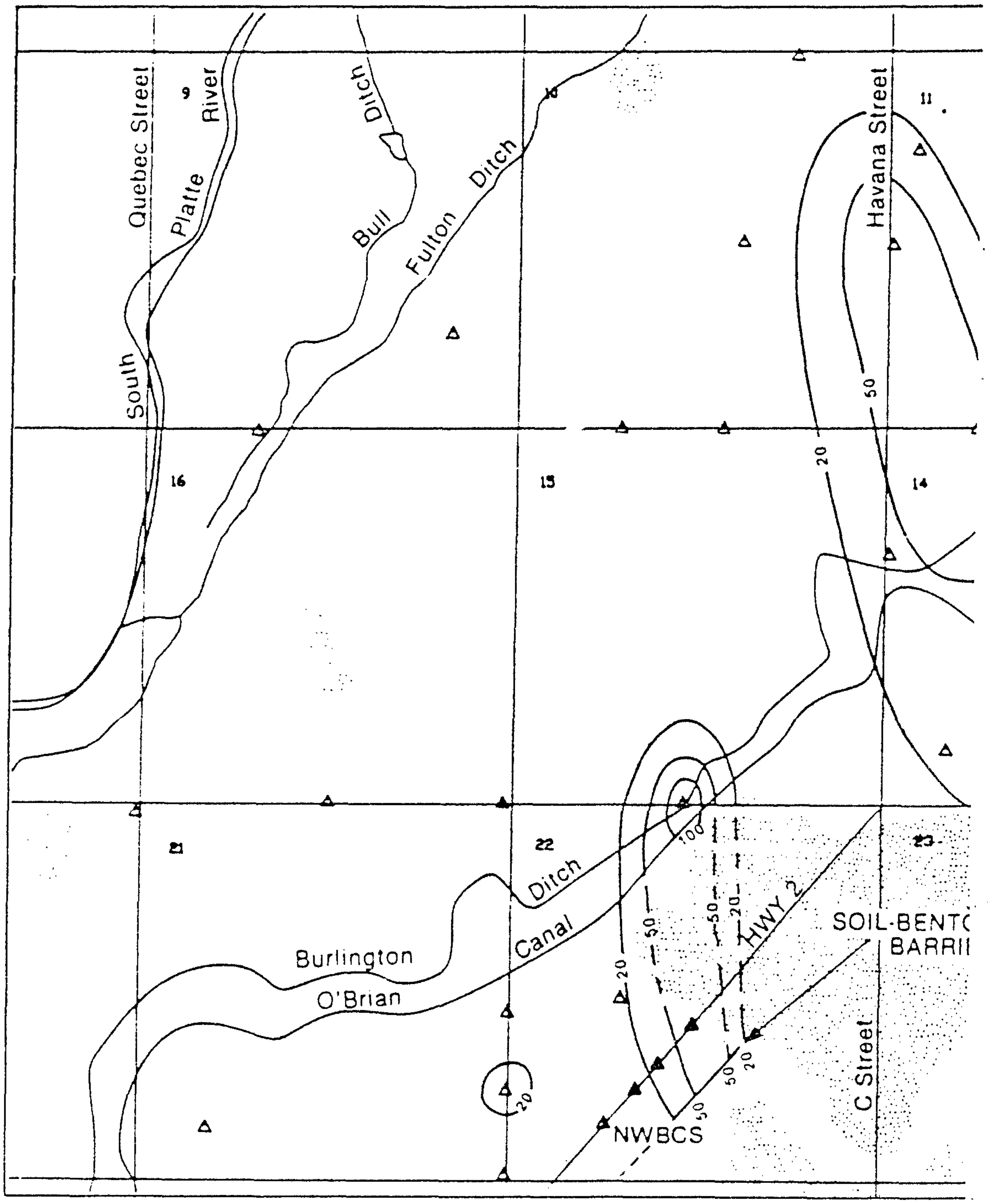
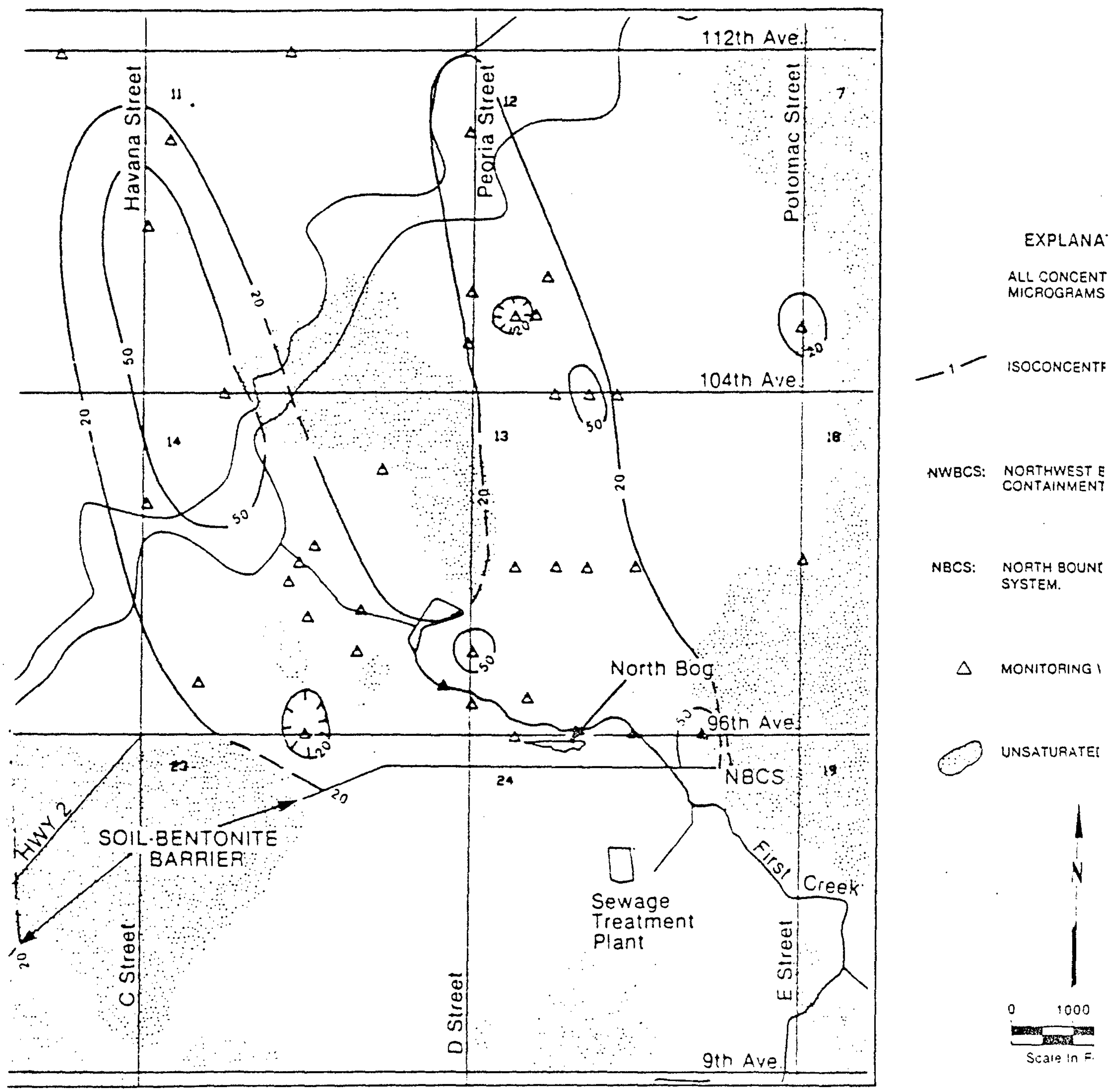


Figure F-57
ZINC CONCENTRATION DISTRIBUTION, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



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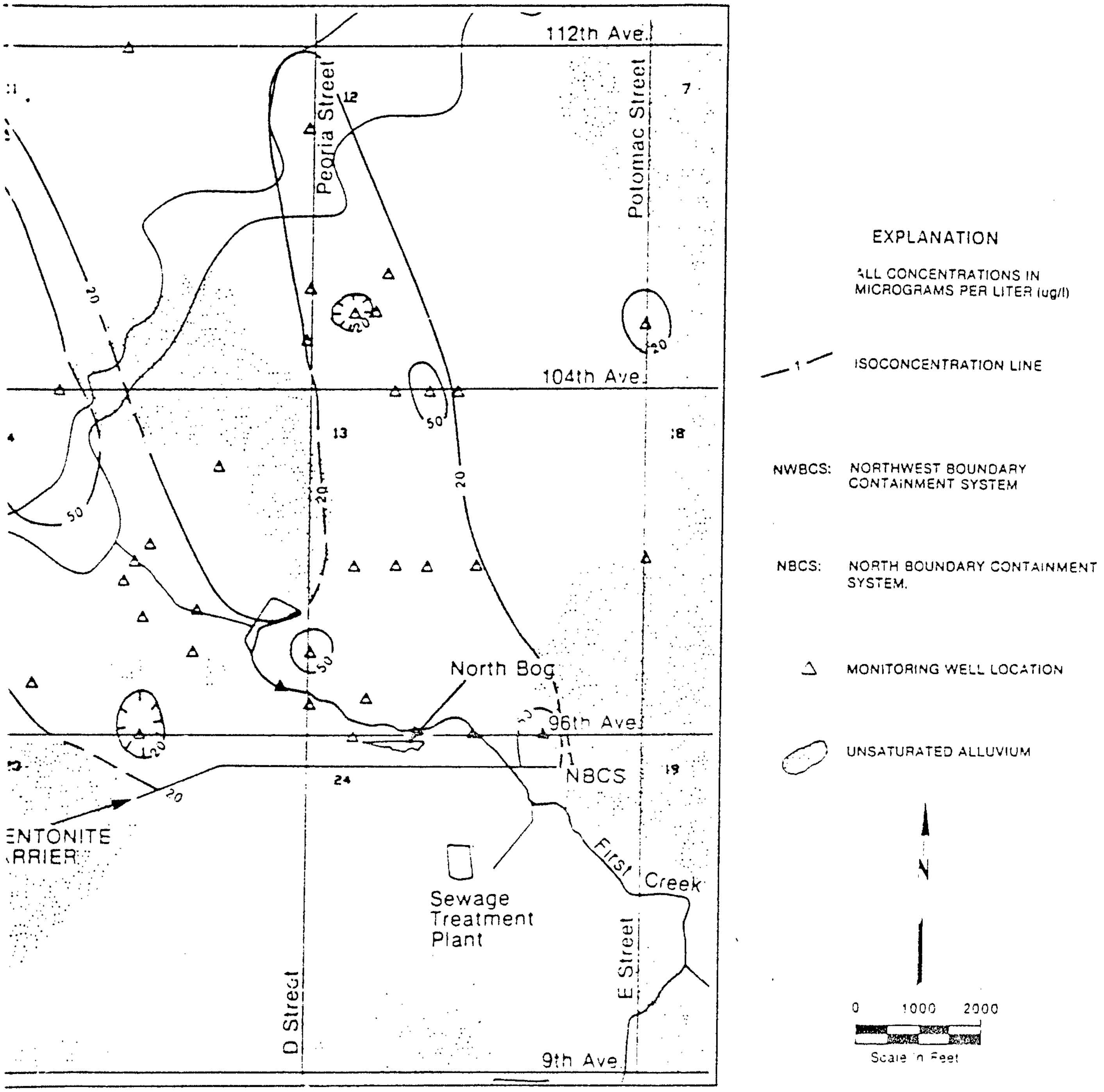
For Rocky Mountain A

Aberdeen Proving Ground, Mar



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Aberdeen Proving Ground, Maryland

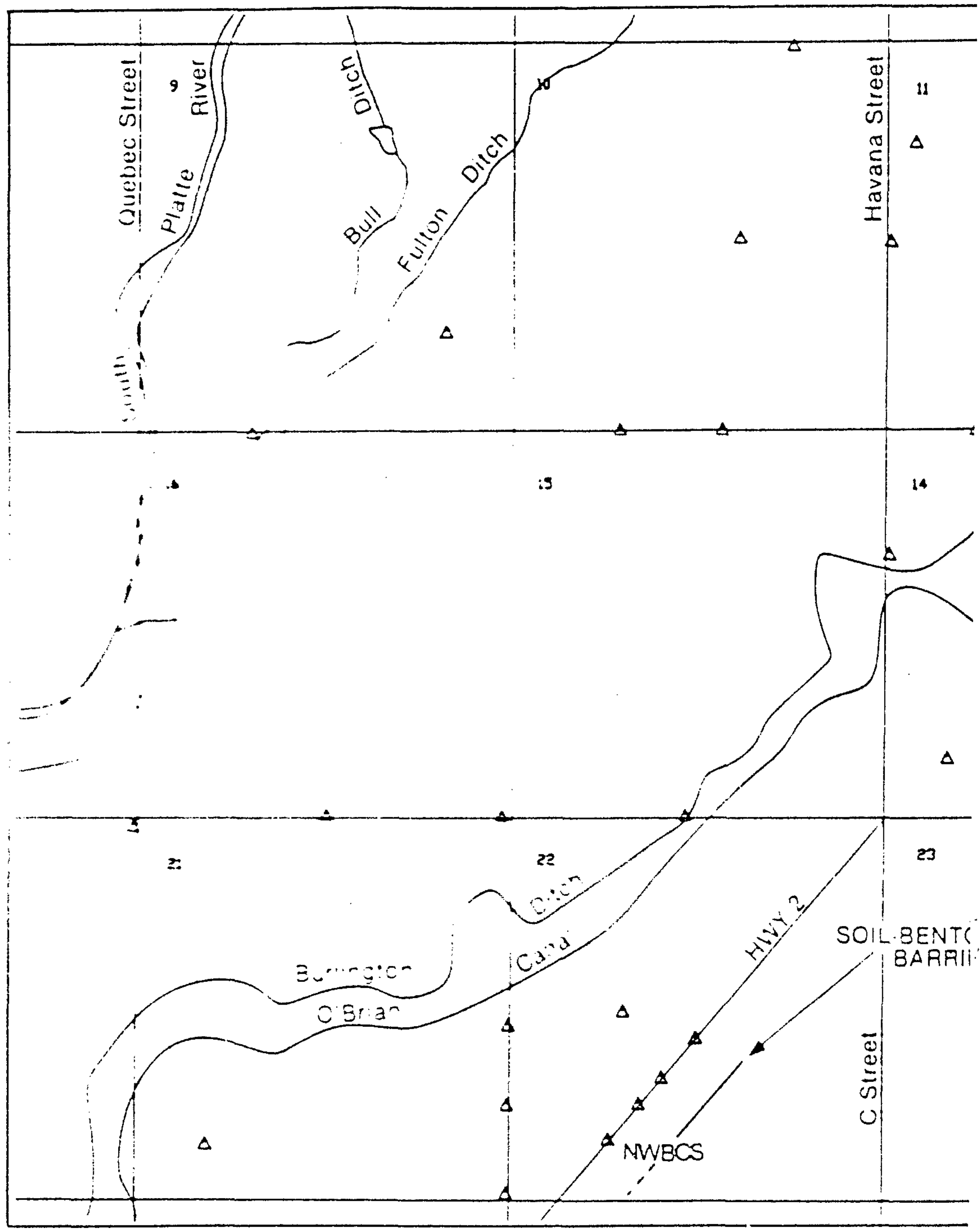
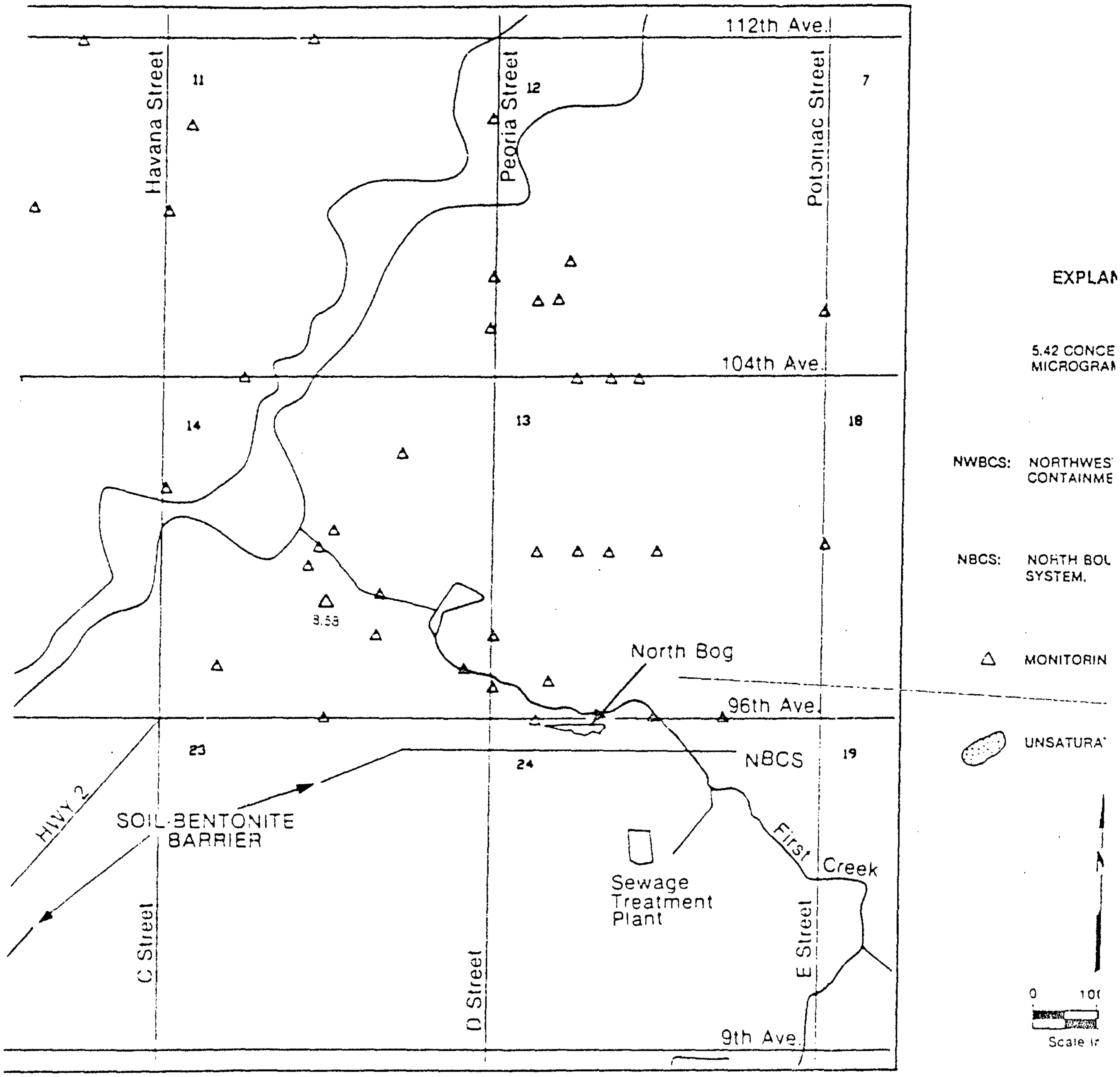


Figure F-58
CADMIUM CONCENTATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE, 1988



RTING LIMITS, ug/l.

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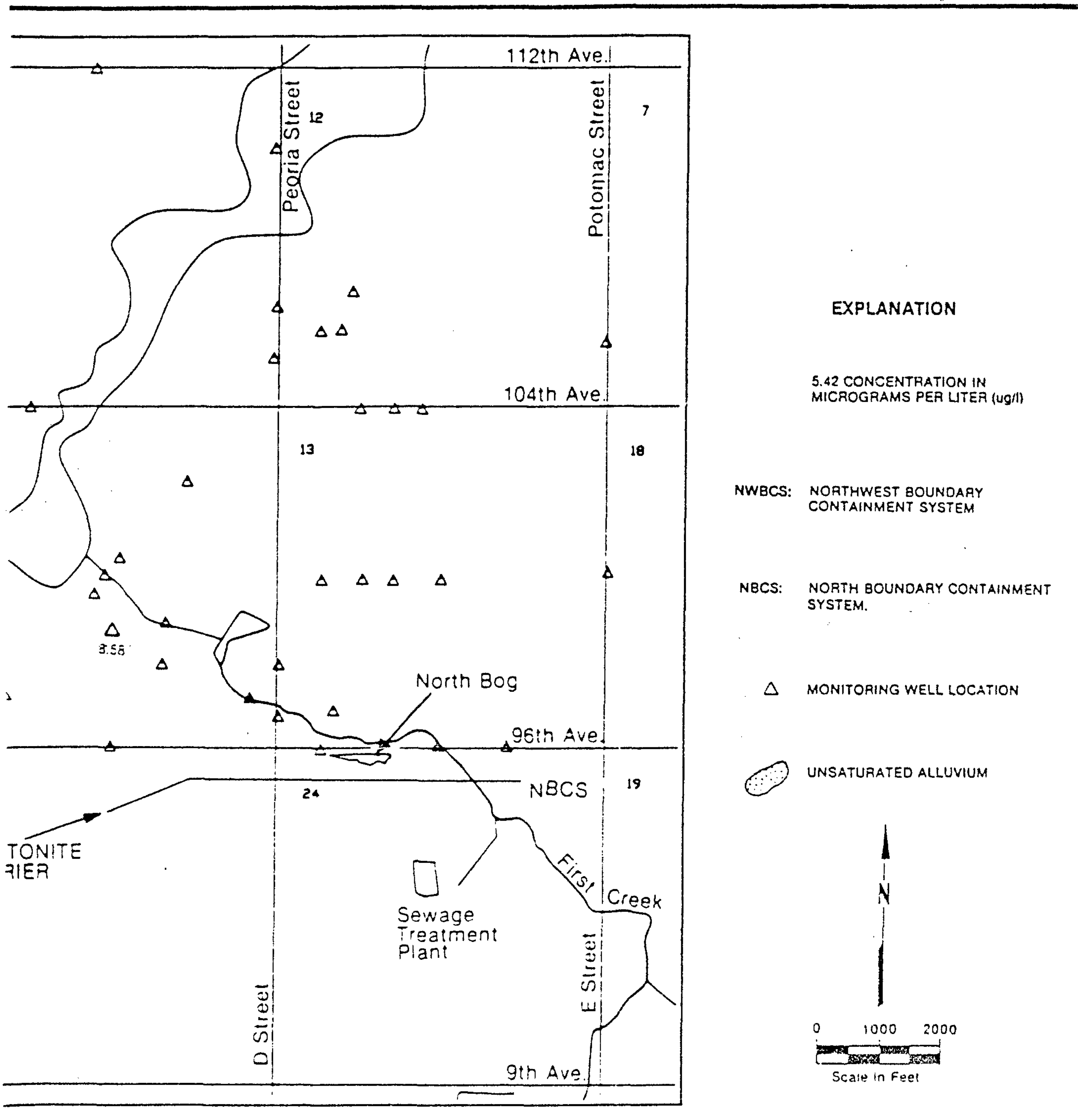

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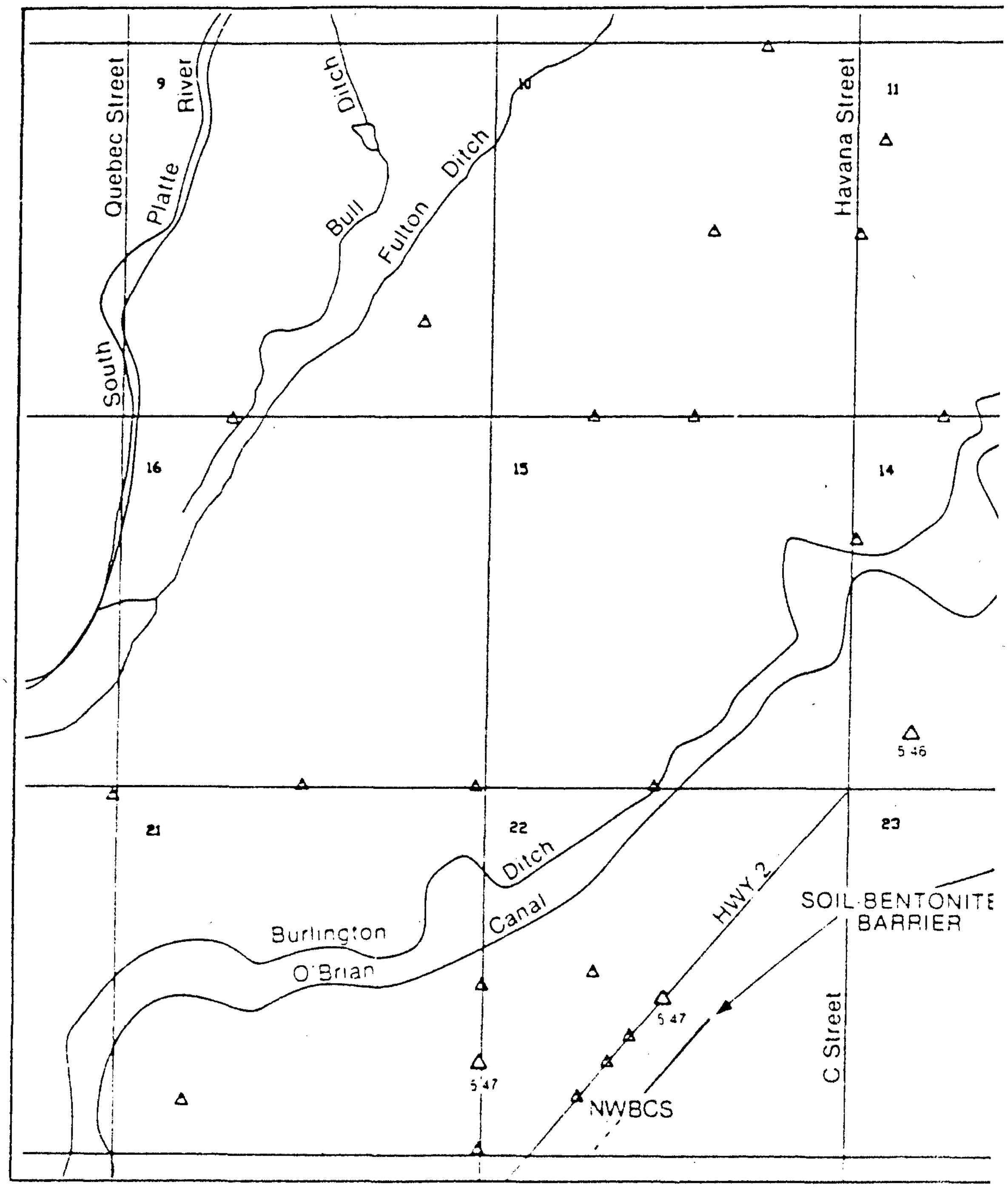
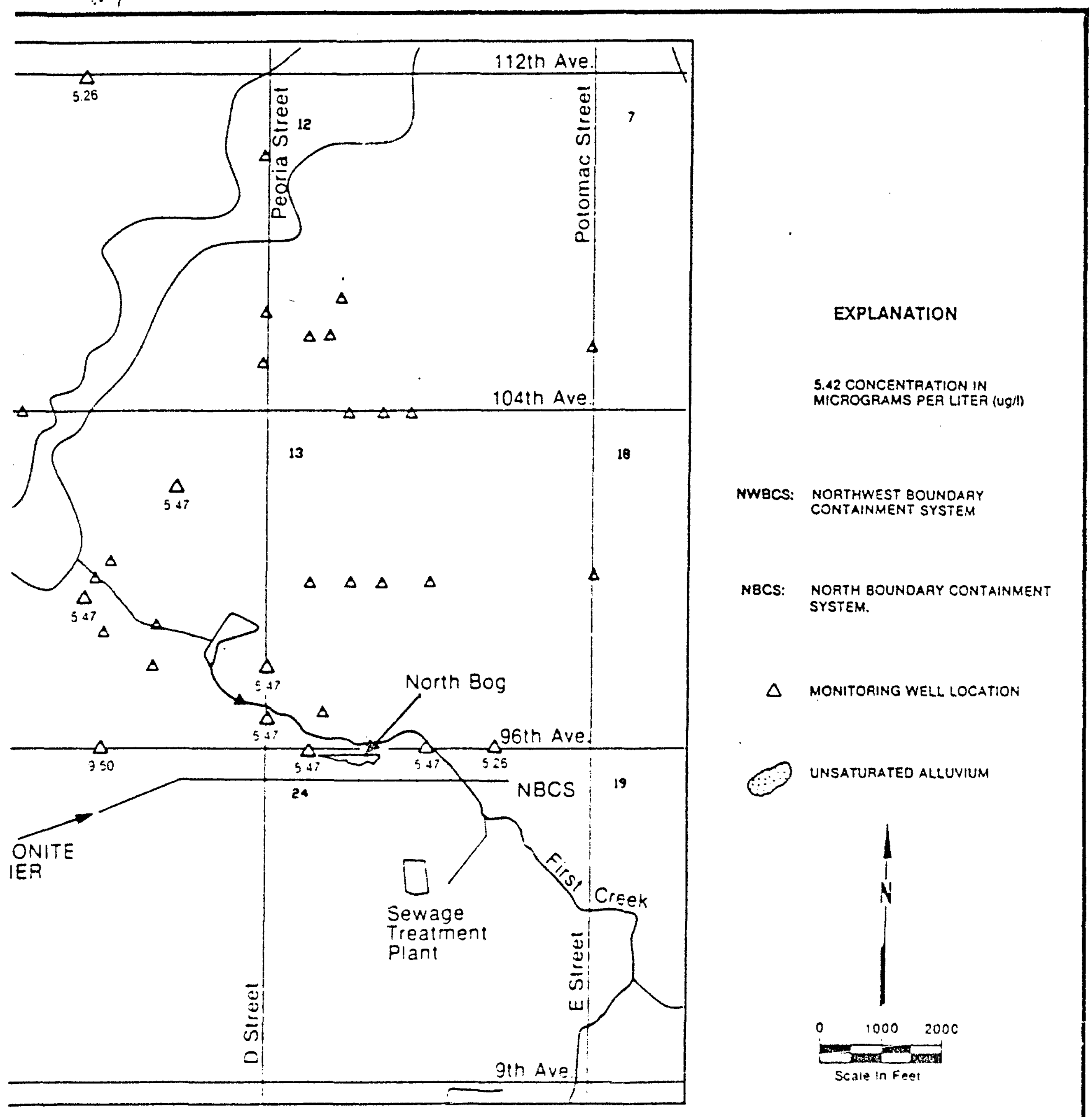


Figure F-59
CADMIUM CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE, 1988



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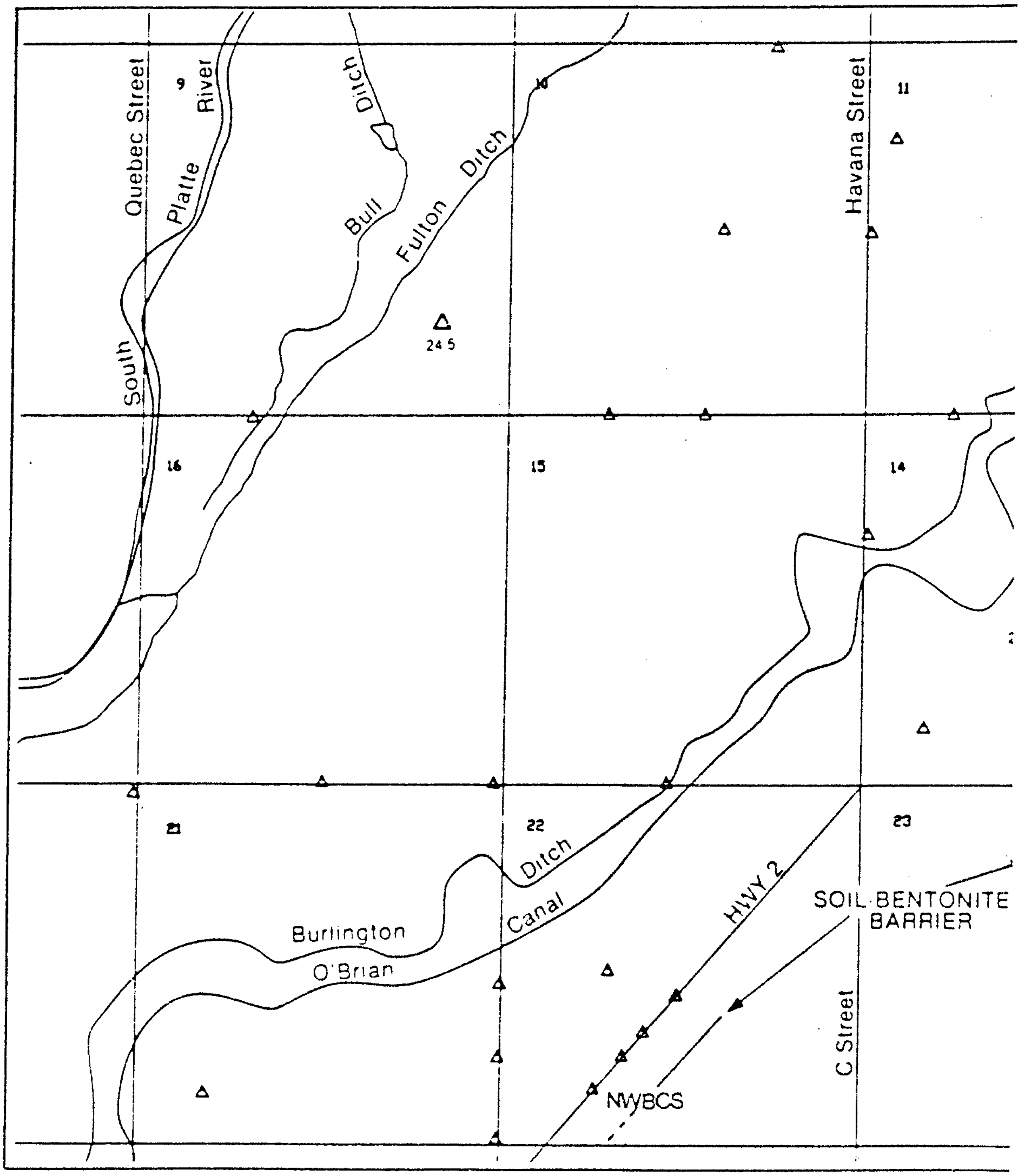
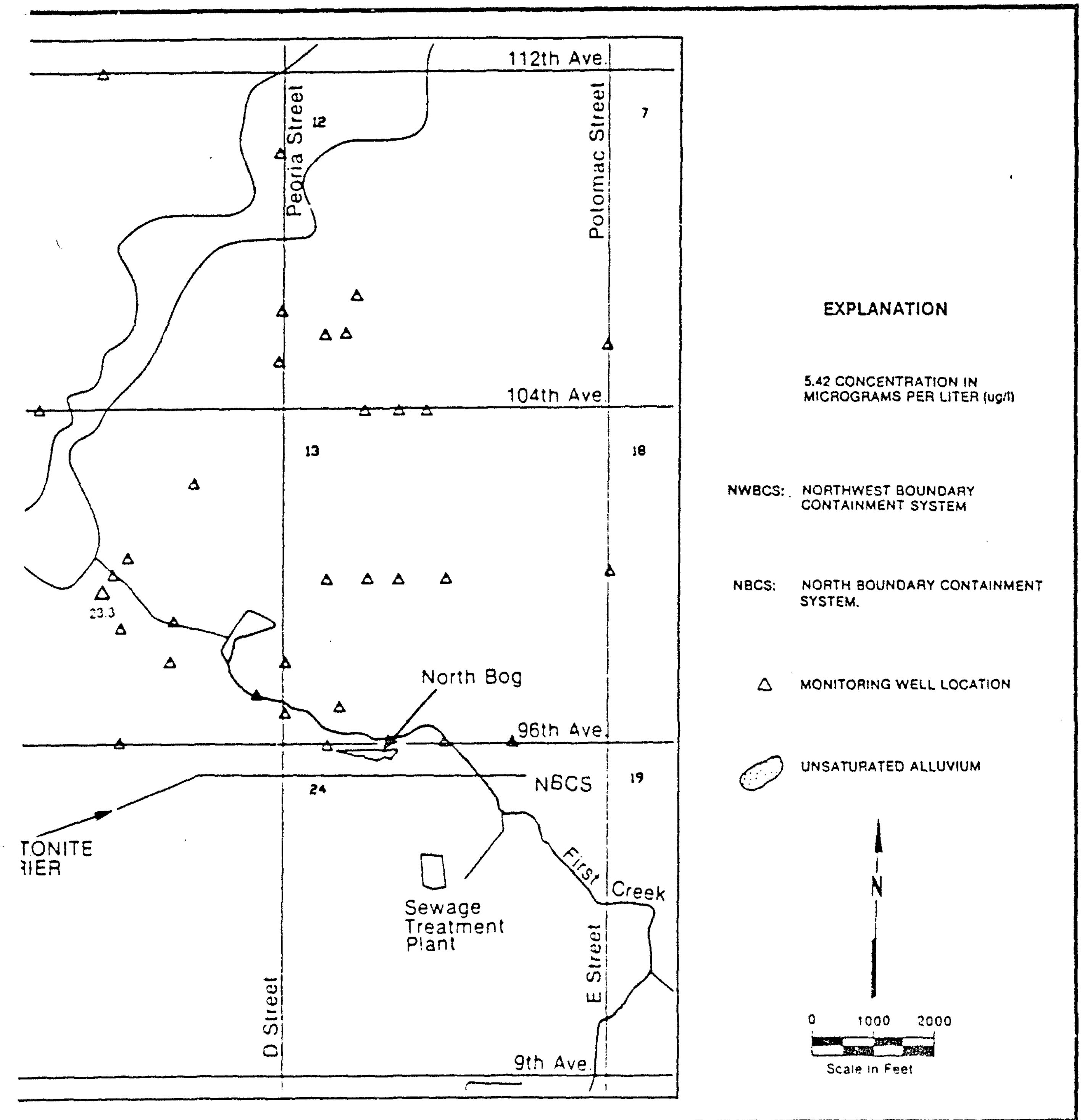


Figure F-60
LEAD CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l,
3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE, 1988



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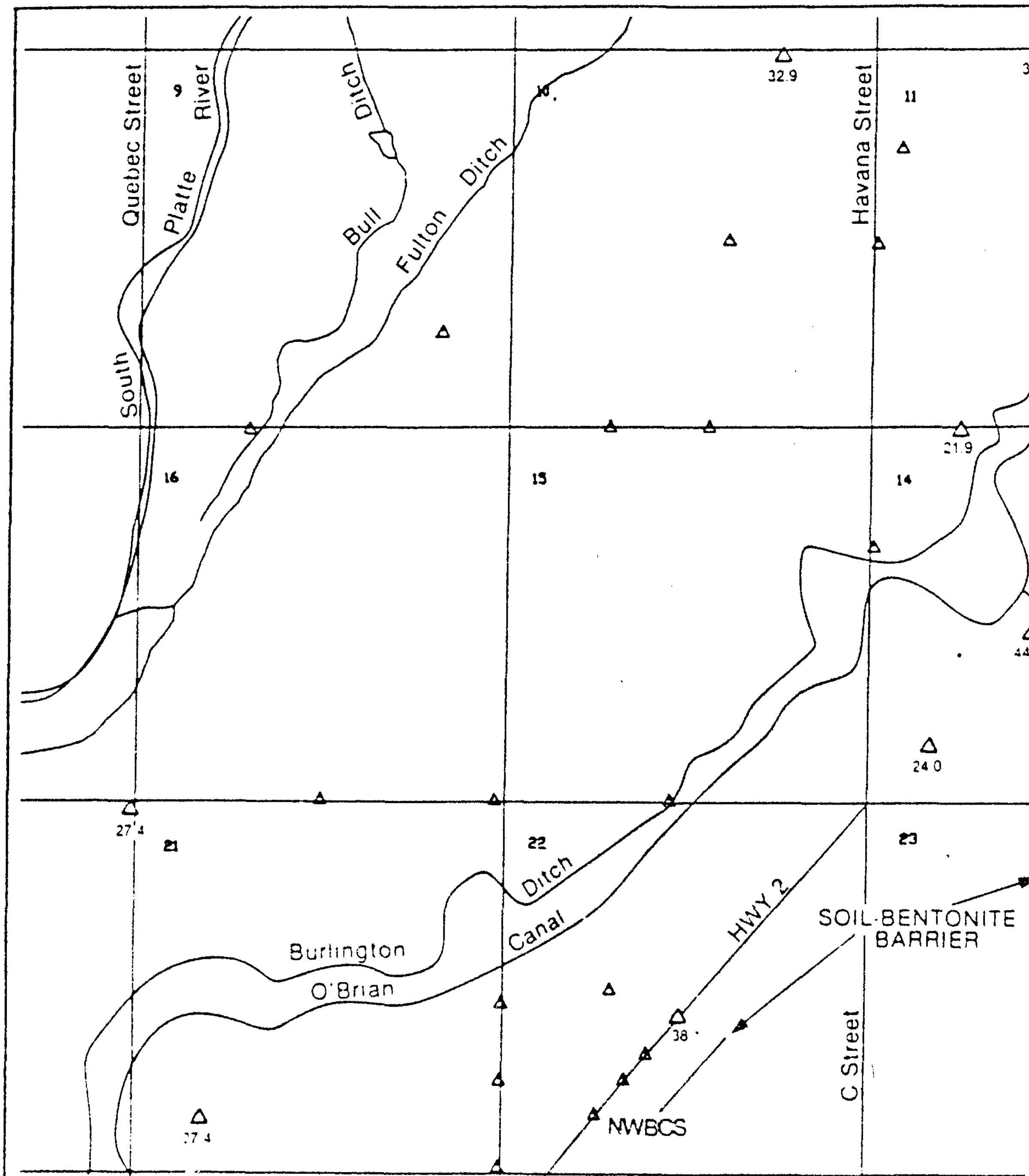
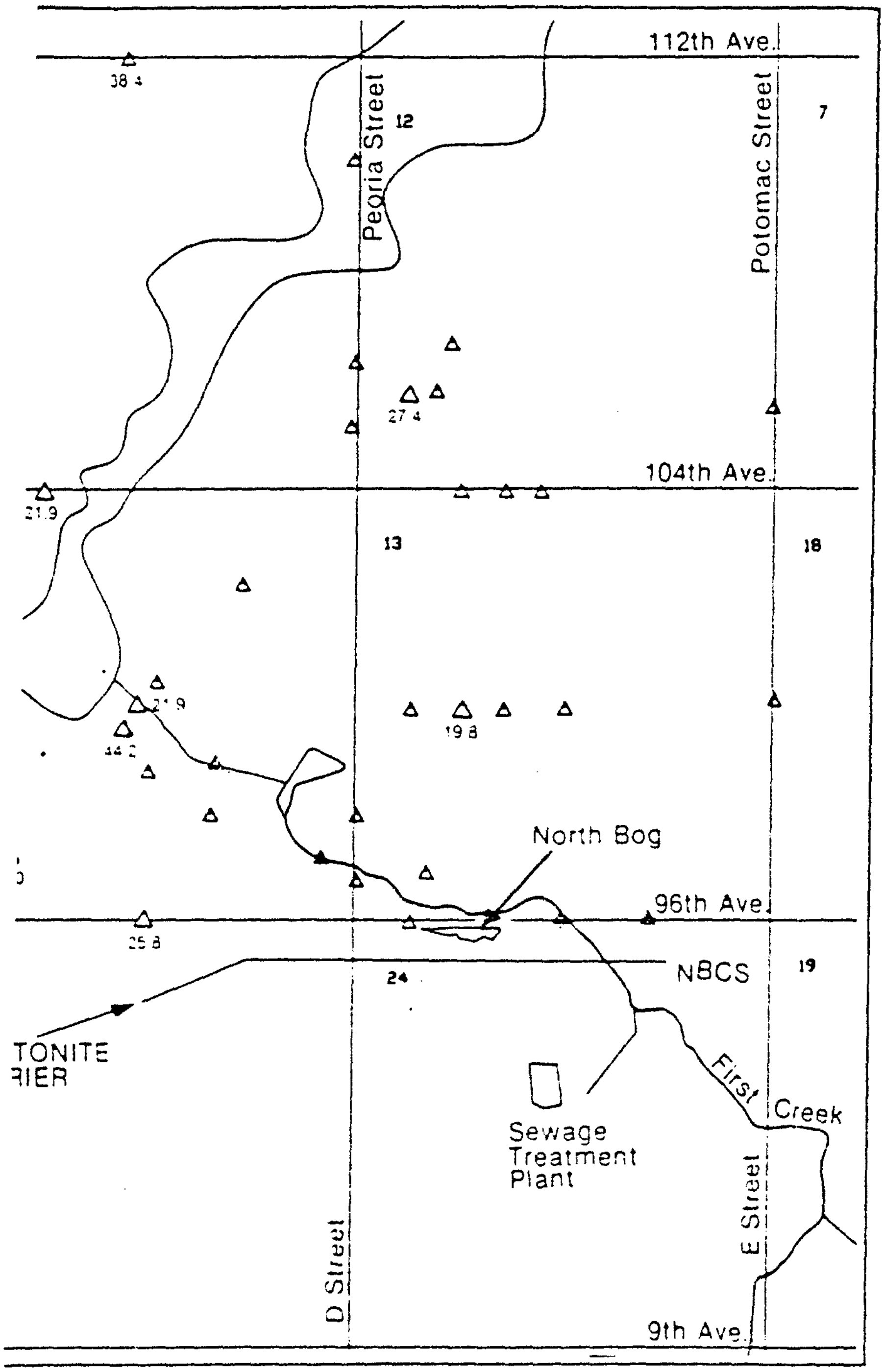


Figure F-61
LEAD CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE: ESE 1988



EXPLANATION

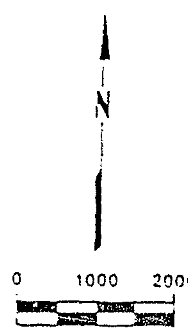
5.42 CONCENTRATION IN MICROGRAMS PER LITER (ug/l)

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM



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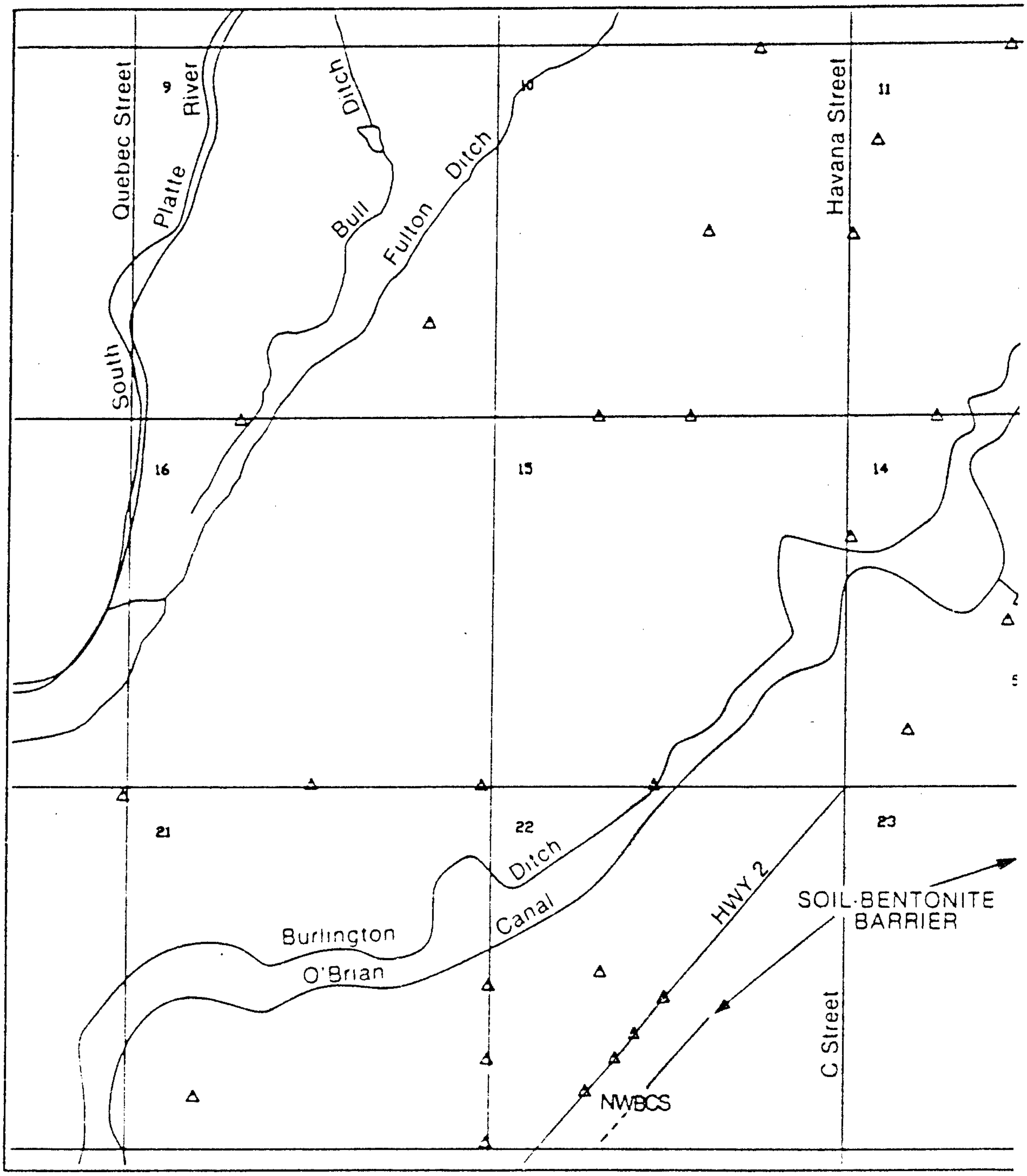
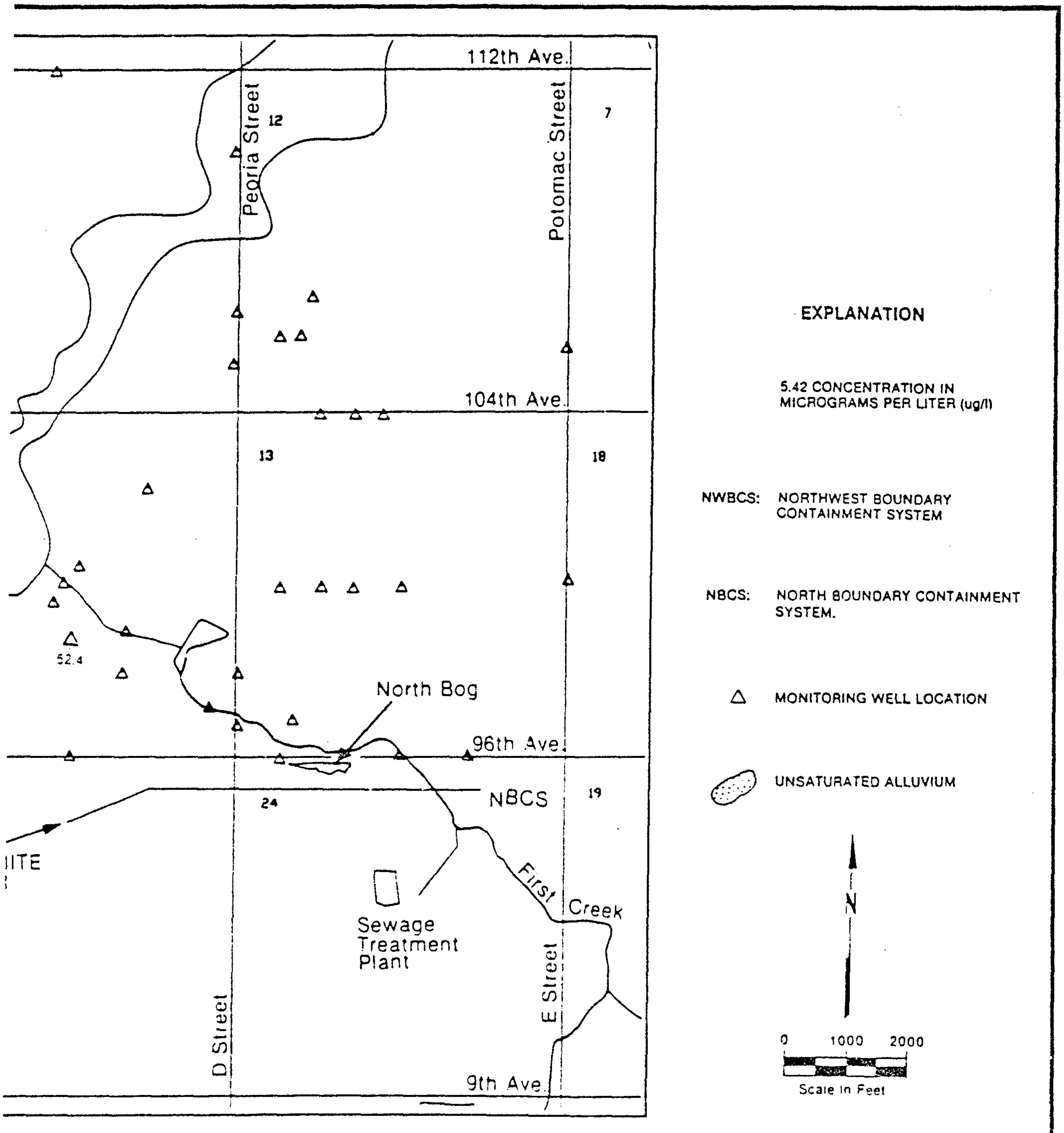


Figure F-62
CHROMIUM CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE, 1988



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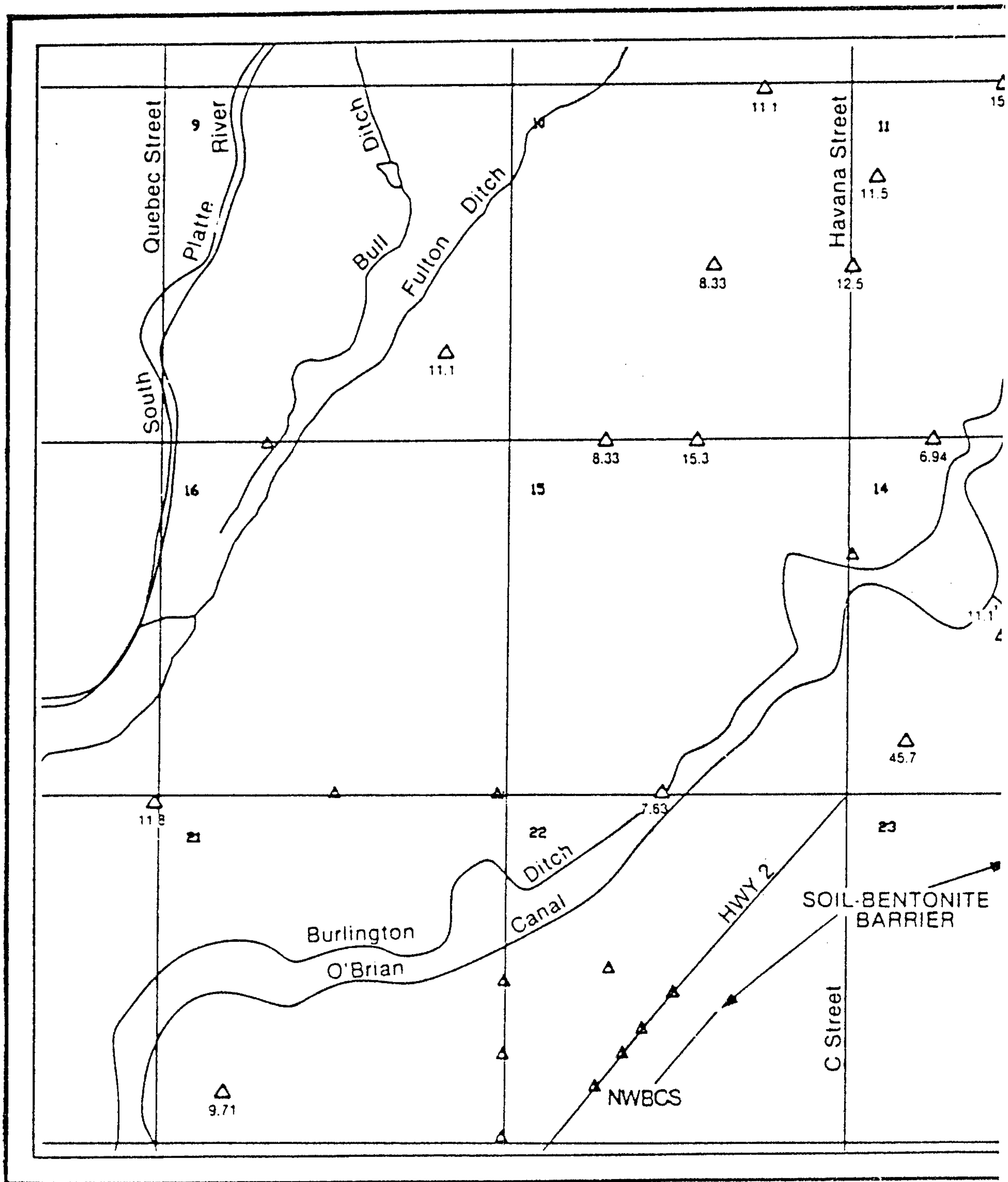
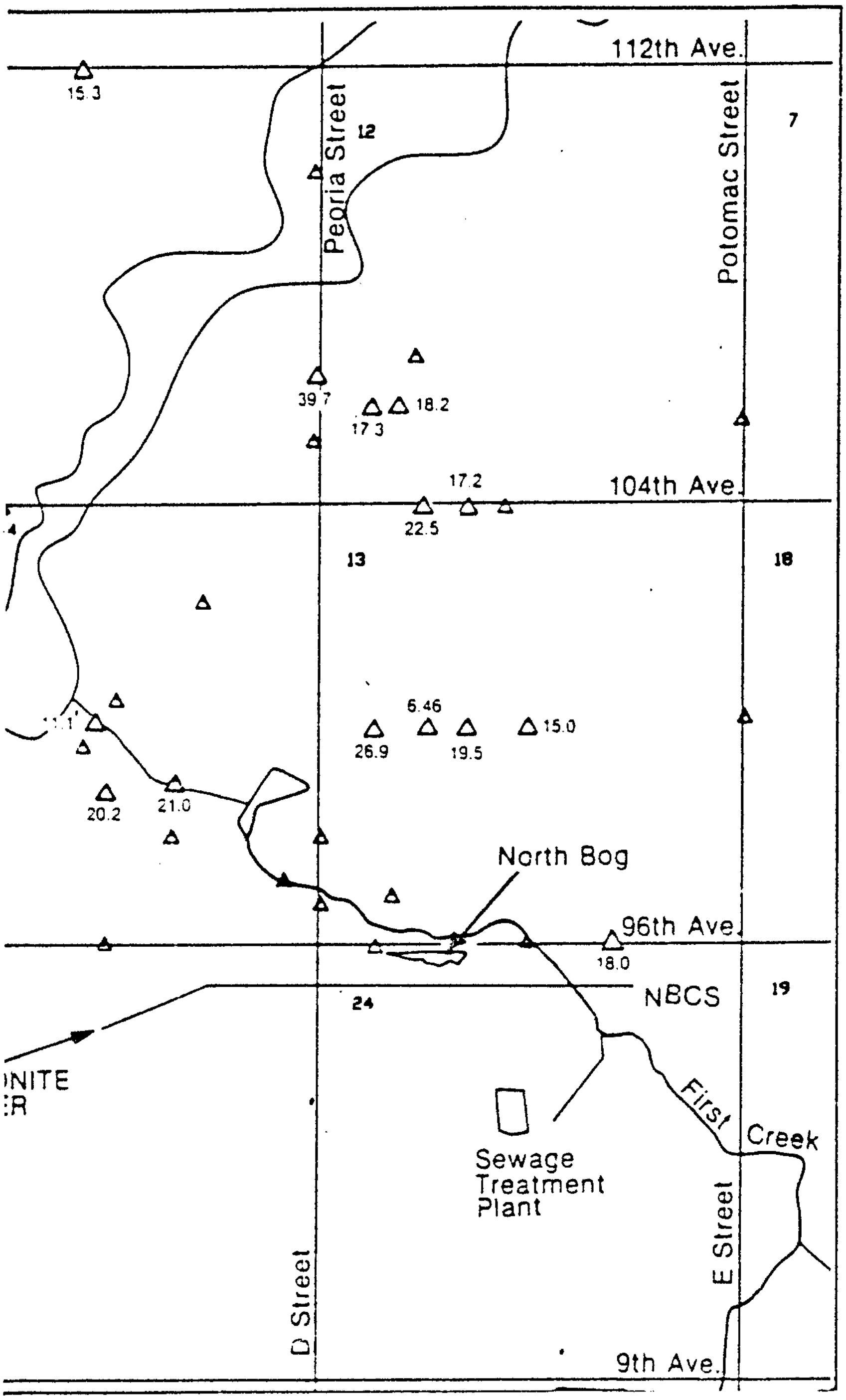


Figure F-63
CHROMIUM CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE:ESE, 1988



EXPLANATION

5.42 CONCENTRATION IN MICROGRAMS PER LITER (ug/l)

NWBCS: NORTHWEST BOUNDARY CONTAINMENT SYSTEM

NBCS: NORTH BOUNDARY CONTAINMENT SYSTEM.

MONITORING WELL LOCATION

UNSATURATED ALLUVIUM

N

0 1000 2000

Scale In Feet

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Aberdeen Proving Ground, Maryland

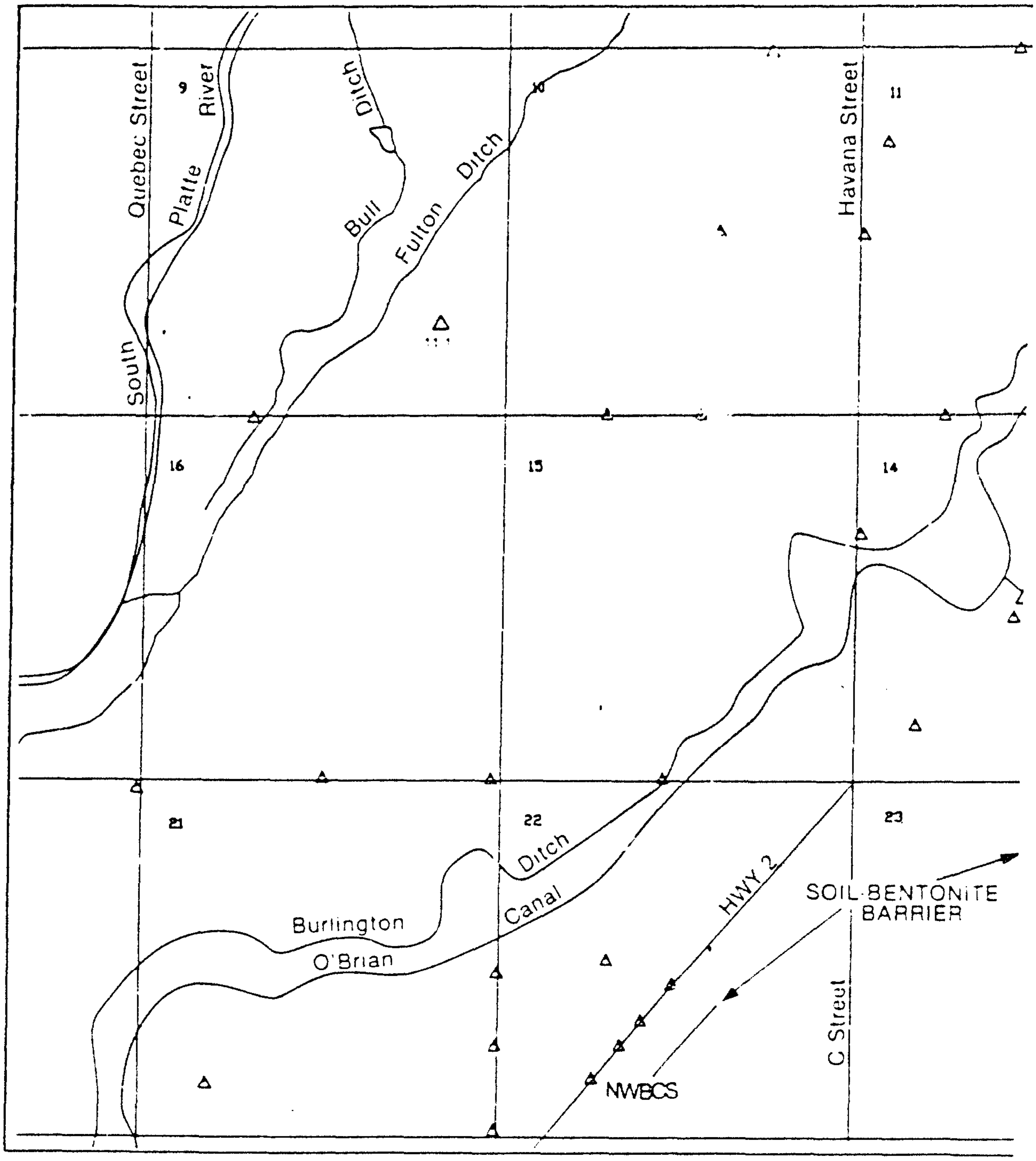
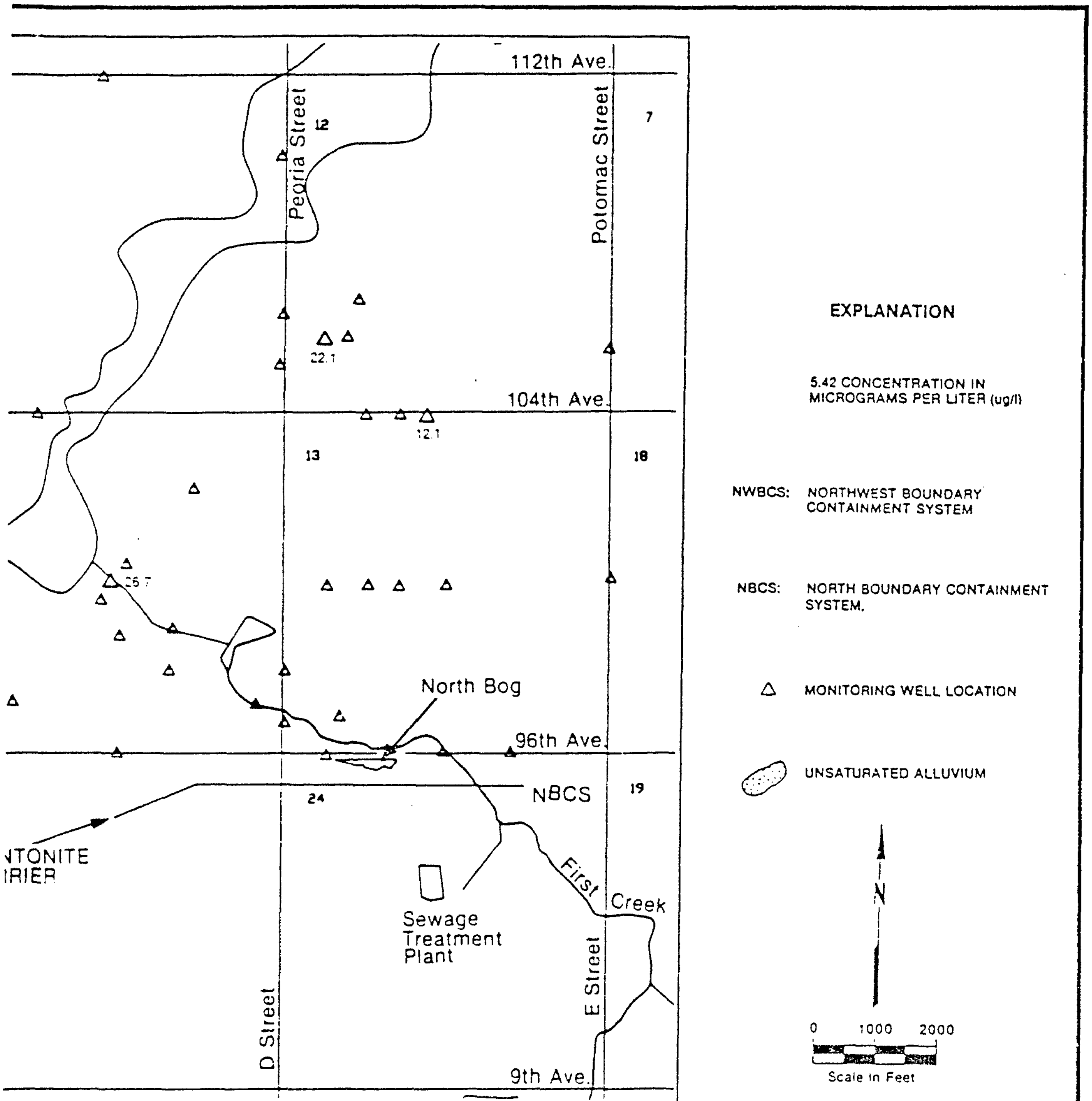


Figure F-64
COPPER CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l, 3RD QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE, 1988



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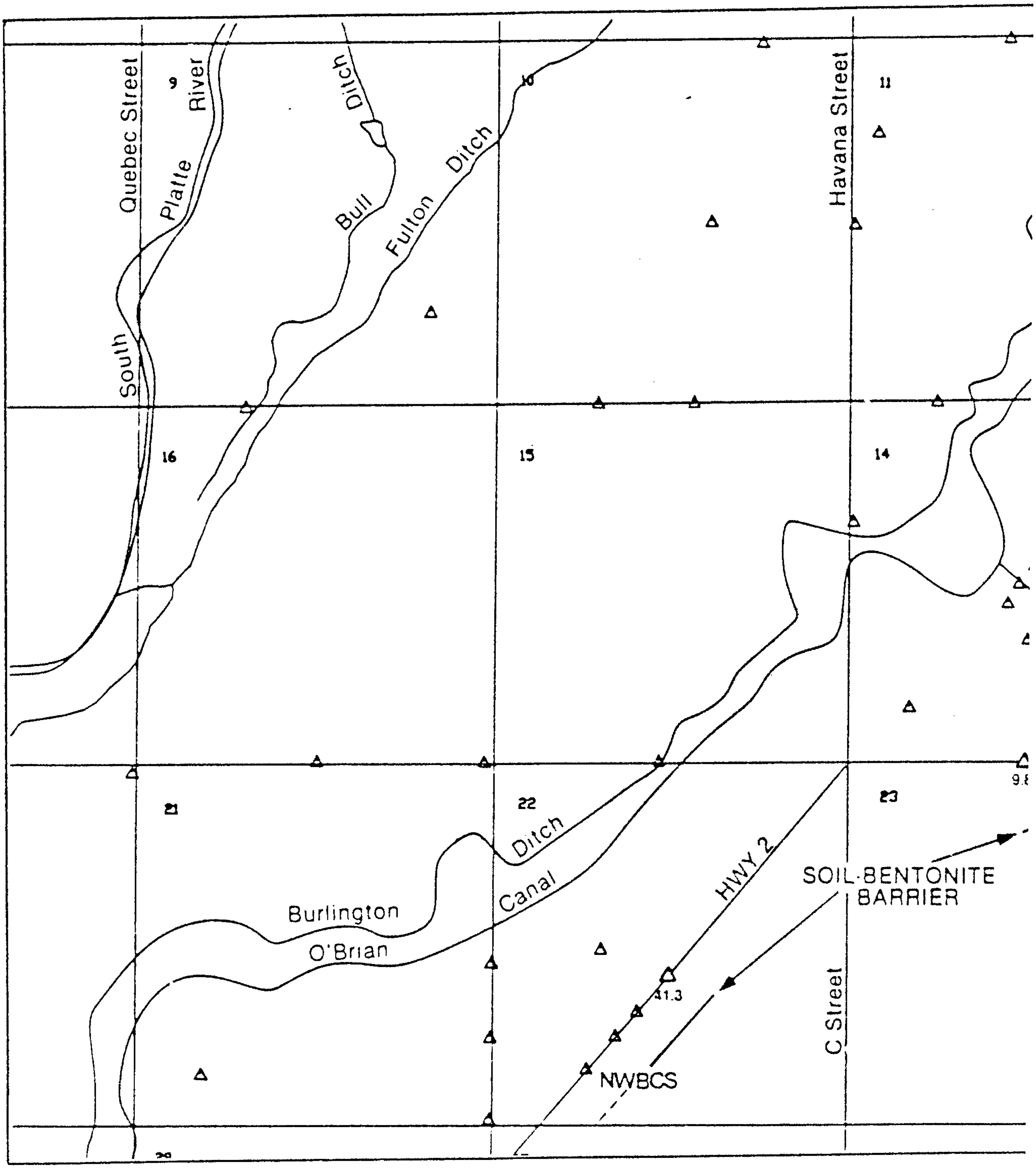
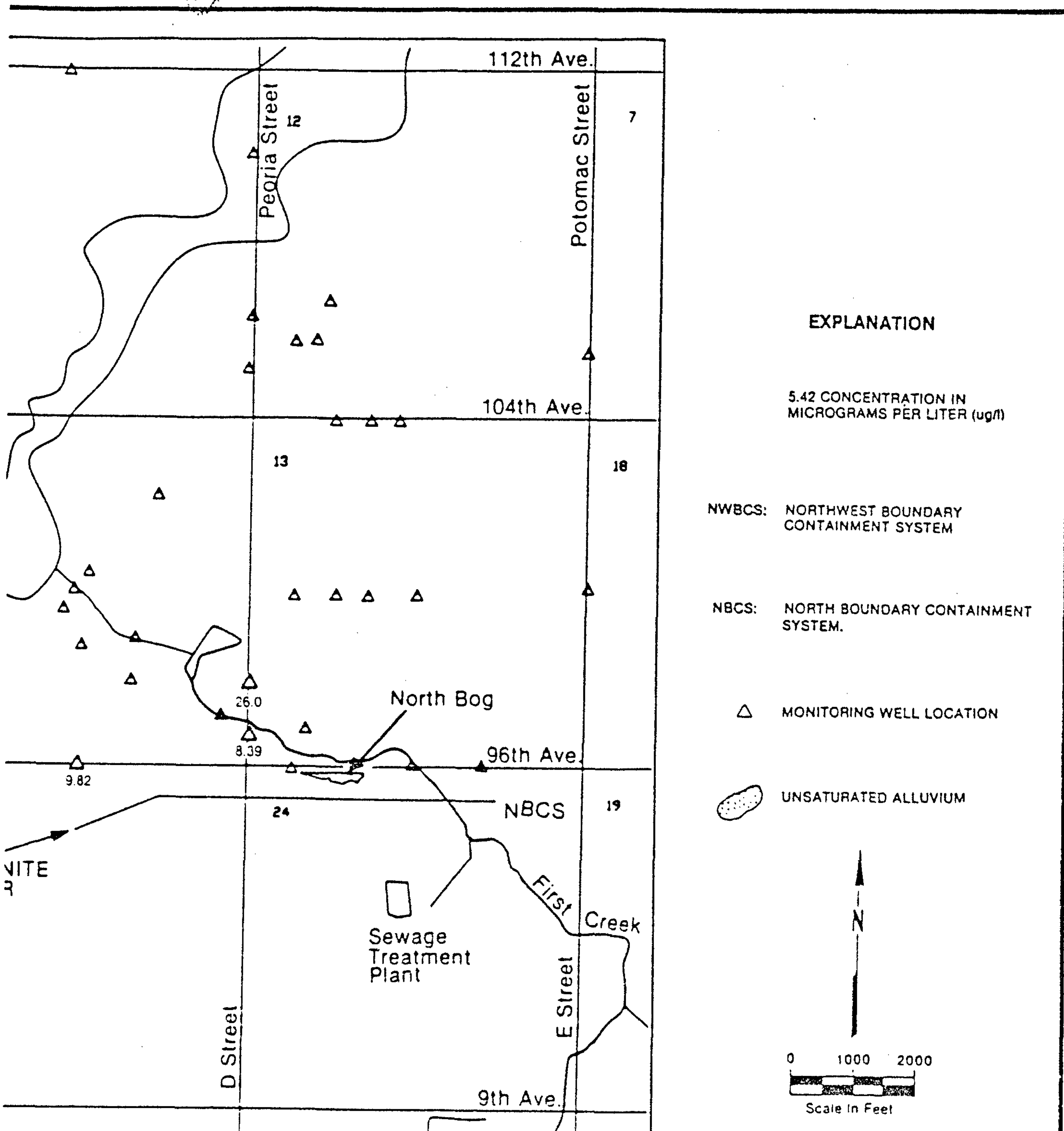


Figure F-65
COPPER CONCENTRATIONS EXCEEDING CERTIFIED REPORTING LIMITS, ug/l,
4TH QUARTER, FY87, ALLUVIAL AQUIFER

SOURCE ESE 1988



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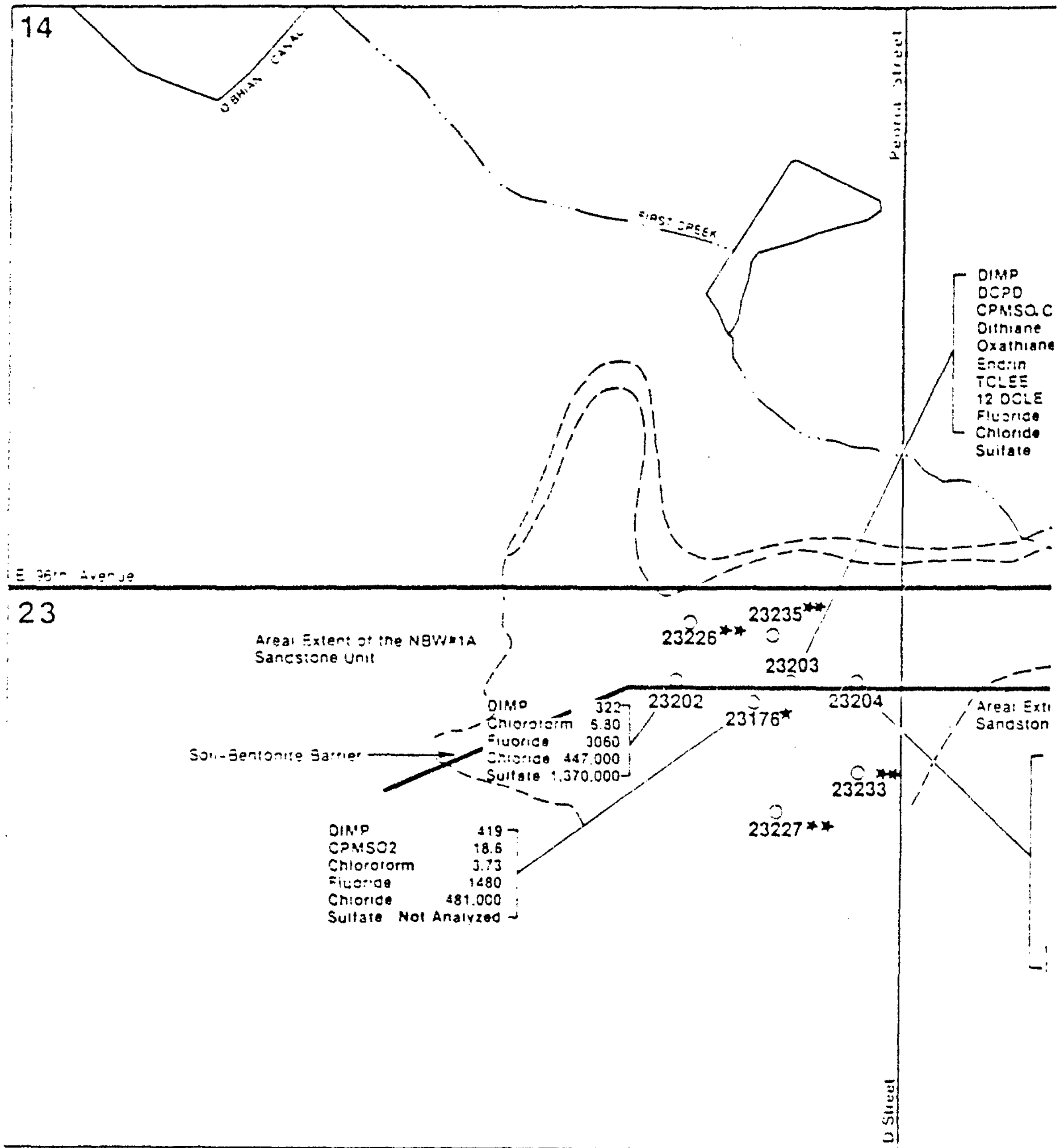
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

DENVER FM

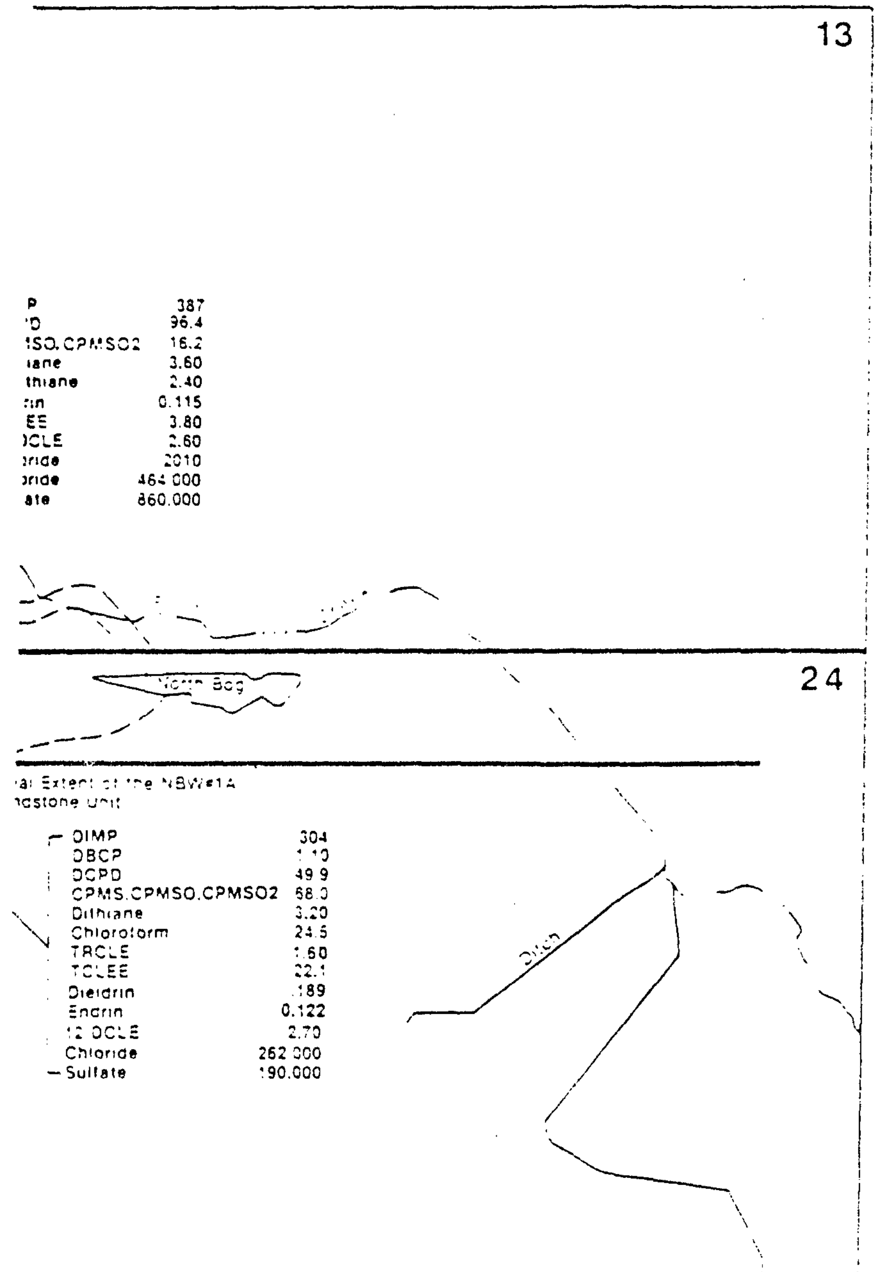


NOTE: Chemical concentrations presented are above certified reporting limits

Figure F-66

WATER CHEMISTRY DATA FOR DENVER FM UNIT NBW#1A
SPRING QUARTER, 1987

SOURCE: ESE 1988

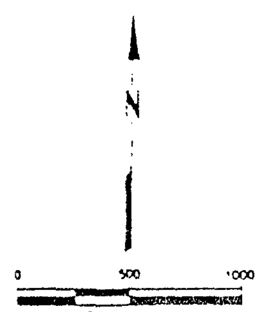


EXPLANATION

★ Initial Screening Program (ISP) Data.

★★ Not completed at time of sampling.

All concentrations in micrograms per liter (ug/l).



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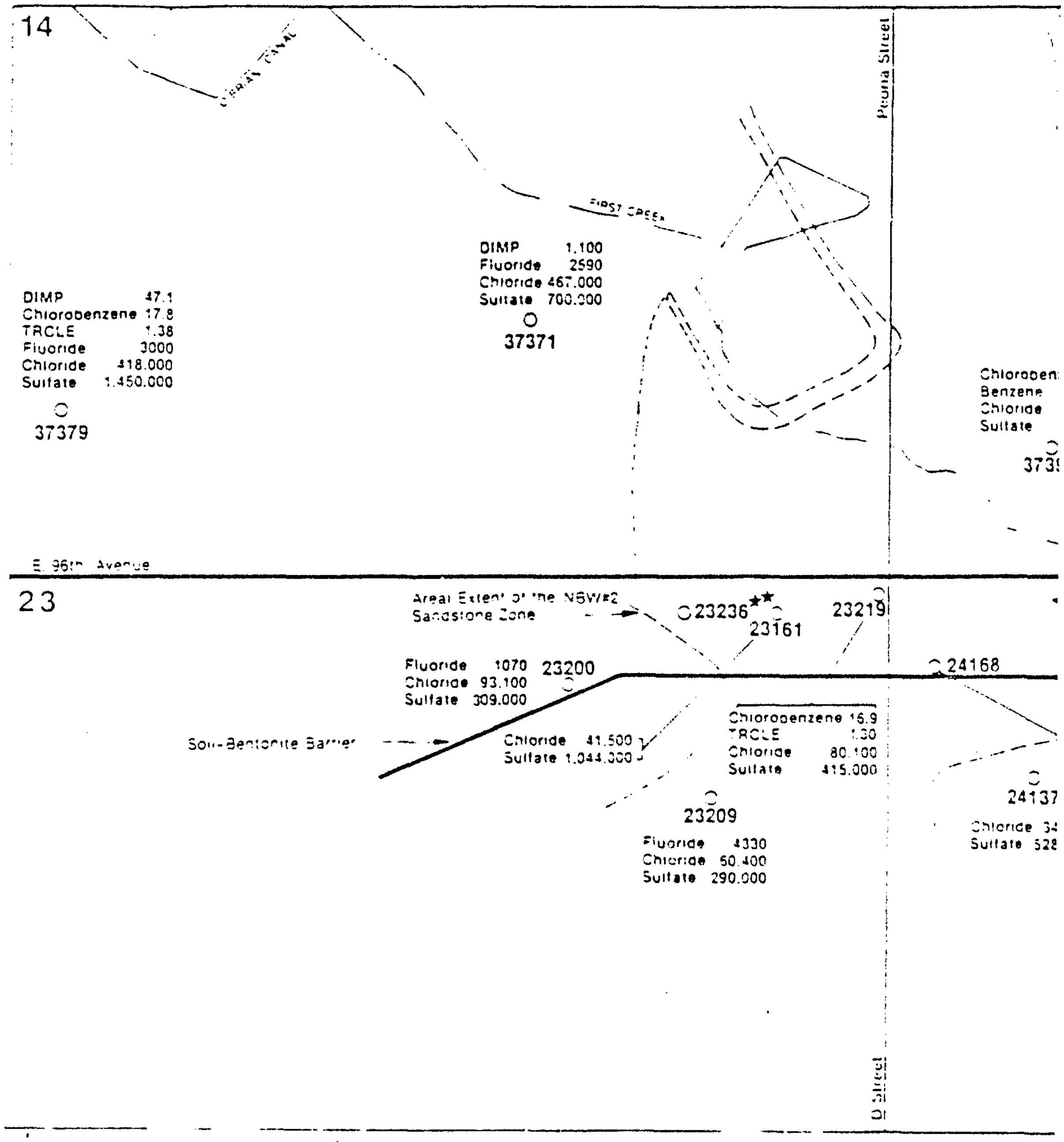
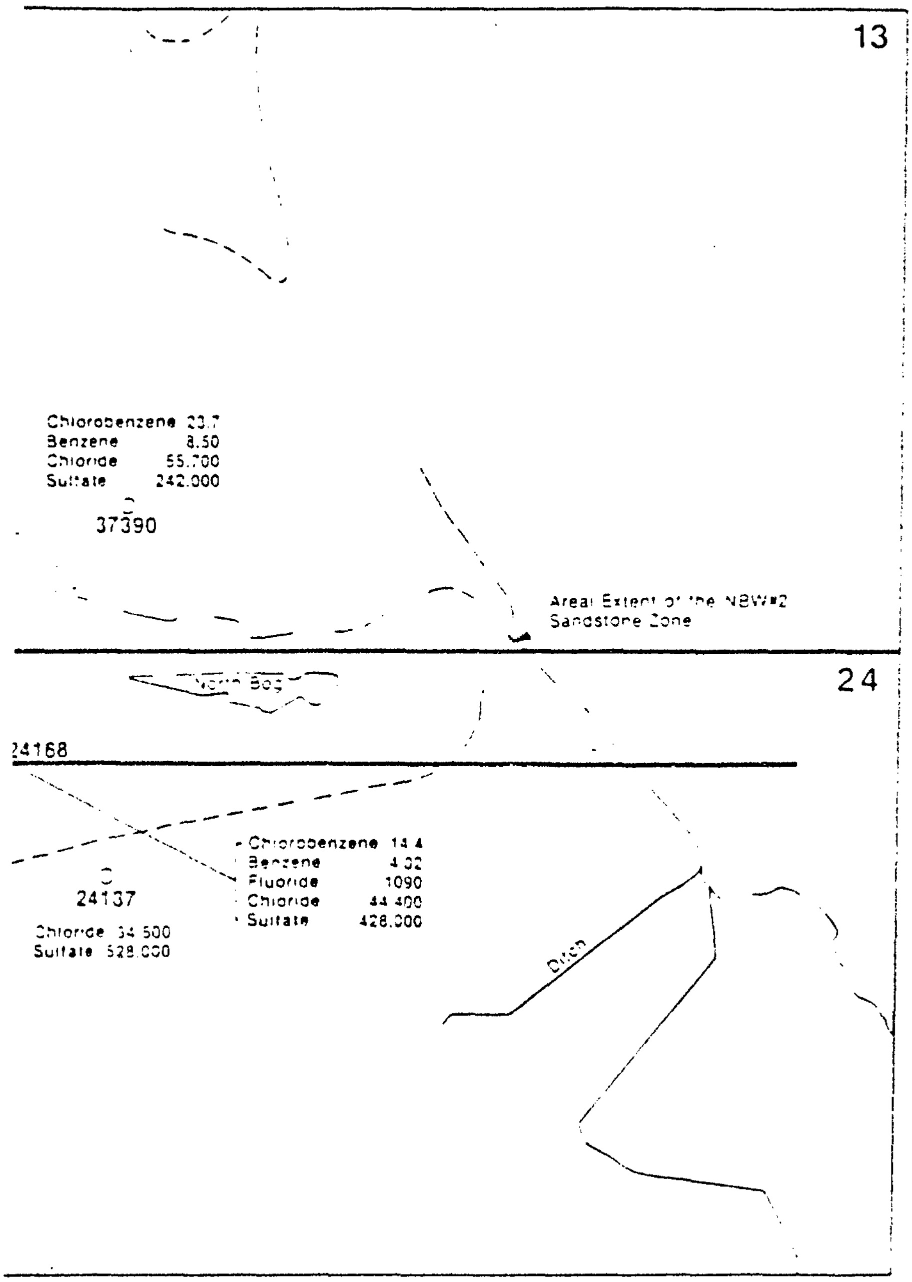


NOTE: Chemical concentrations presented are above certified reporting limits.

Figure F-67

WATER CHEMISTRY DATA FOR DENVER FM UNIT NBW#2
SPRING QUARTER, 1987

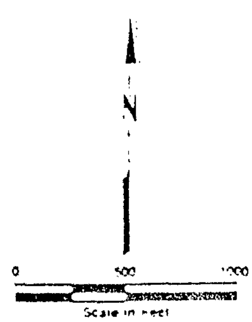
SOURCE: ESE 1988



EXPLANATION

** Not completed at time of sampling.

All concentrations in micrograms per liter (ug/l).



Prepared for:
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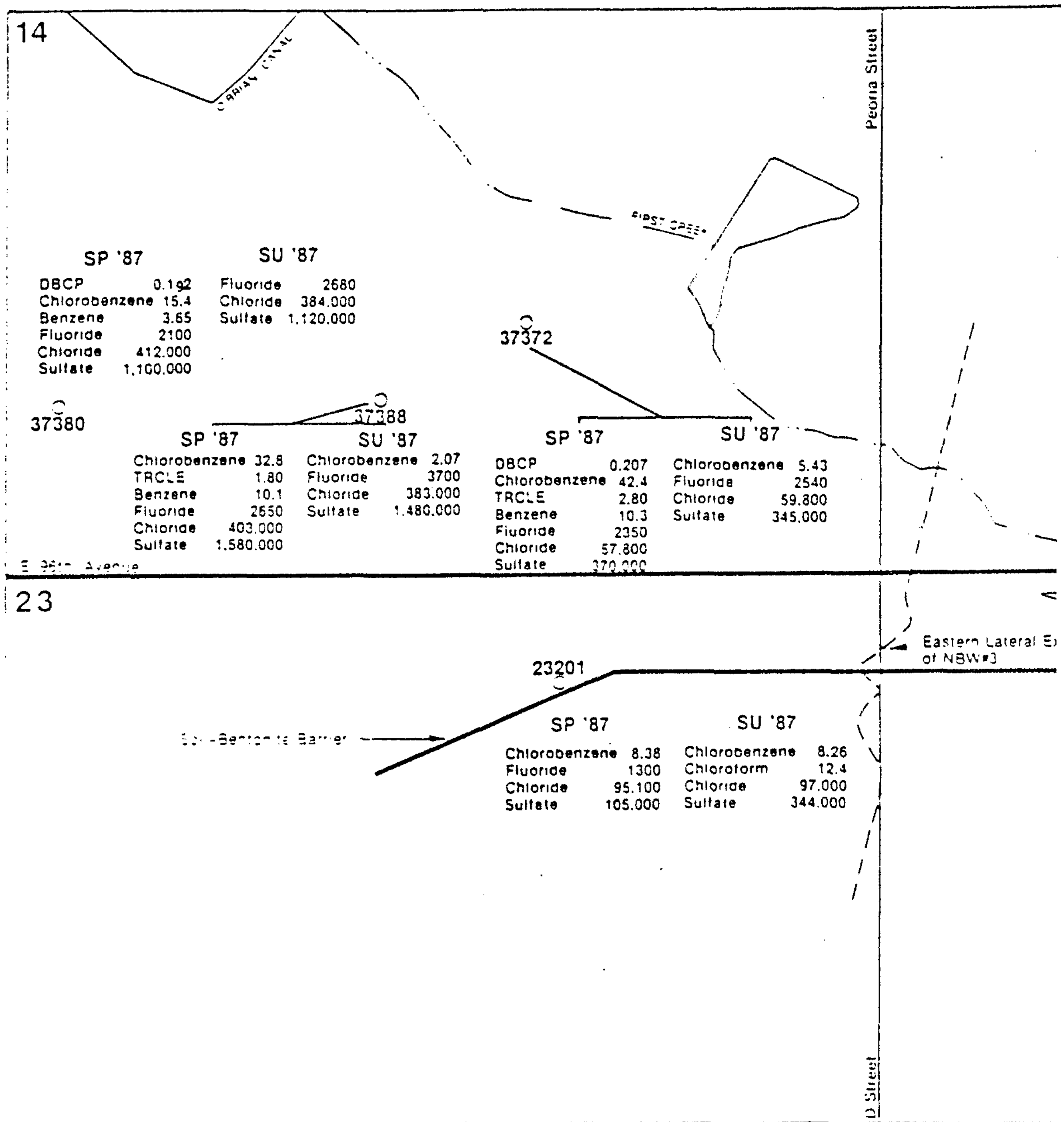
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

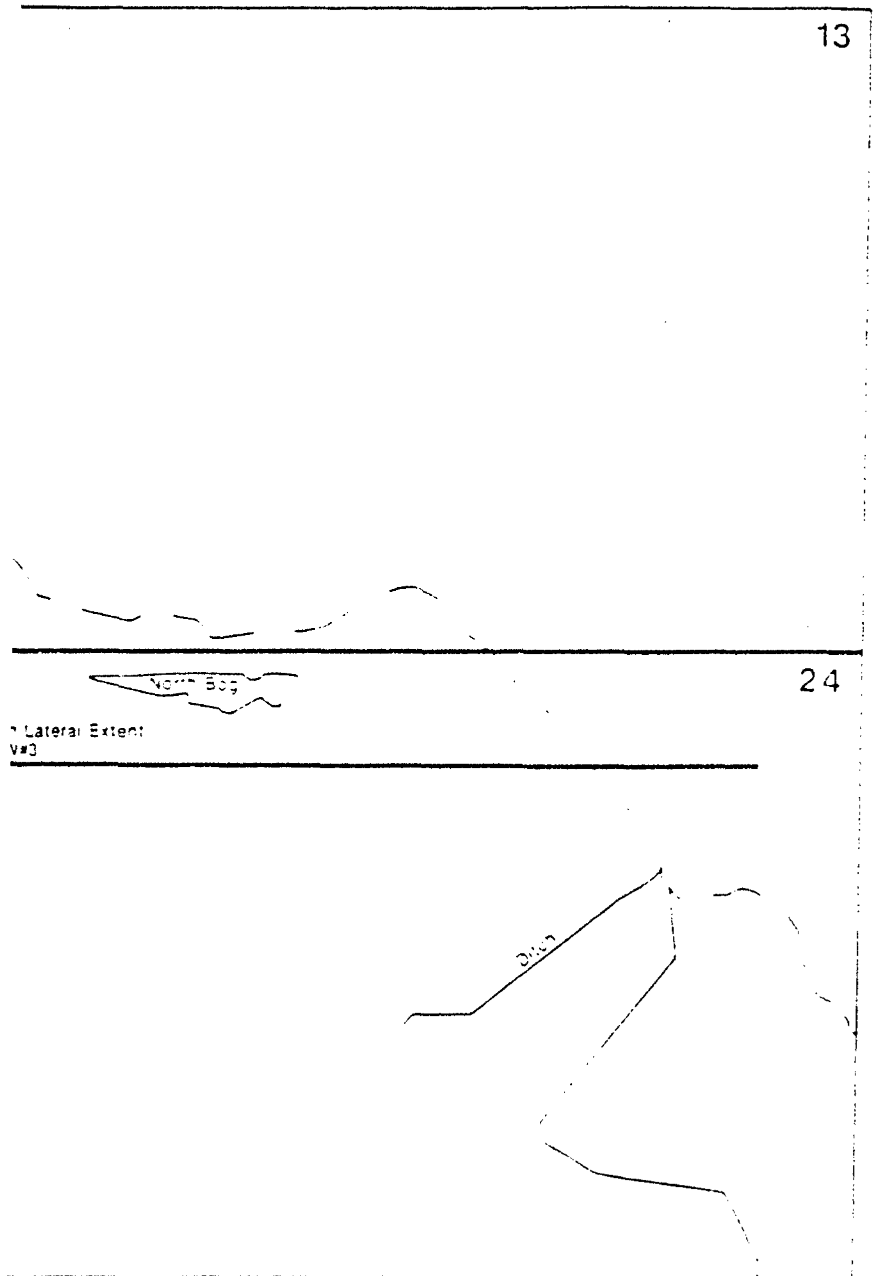


NOTE: Chemical concentrations presented are above certified reporting limits

Figure F-68

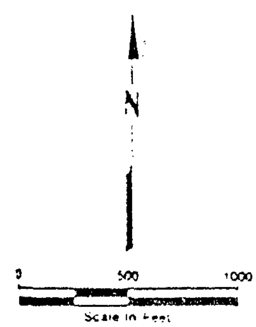
WATER CHEMISTRY DATA FOR DENVER FM UNIT NBW#3
SPRING AND SUMMER QUARTERS, 1987

SOURCE: ESE 1988



EXPLANATION

All concentrations in micrograms per liter (ug/l).



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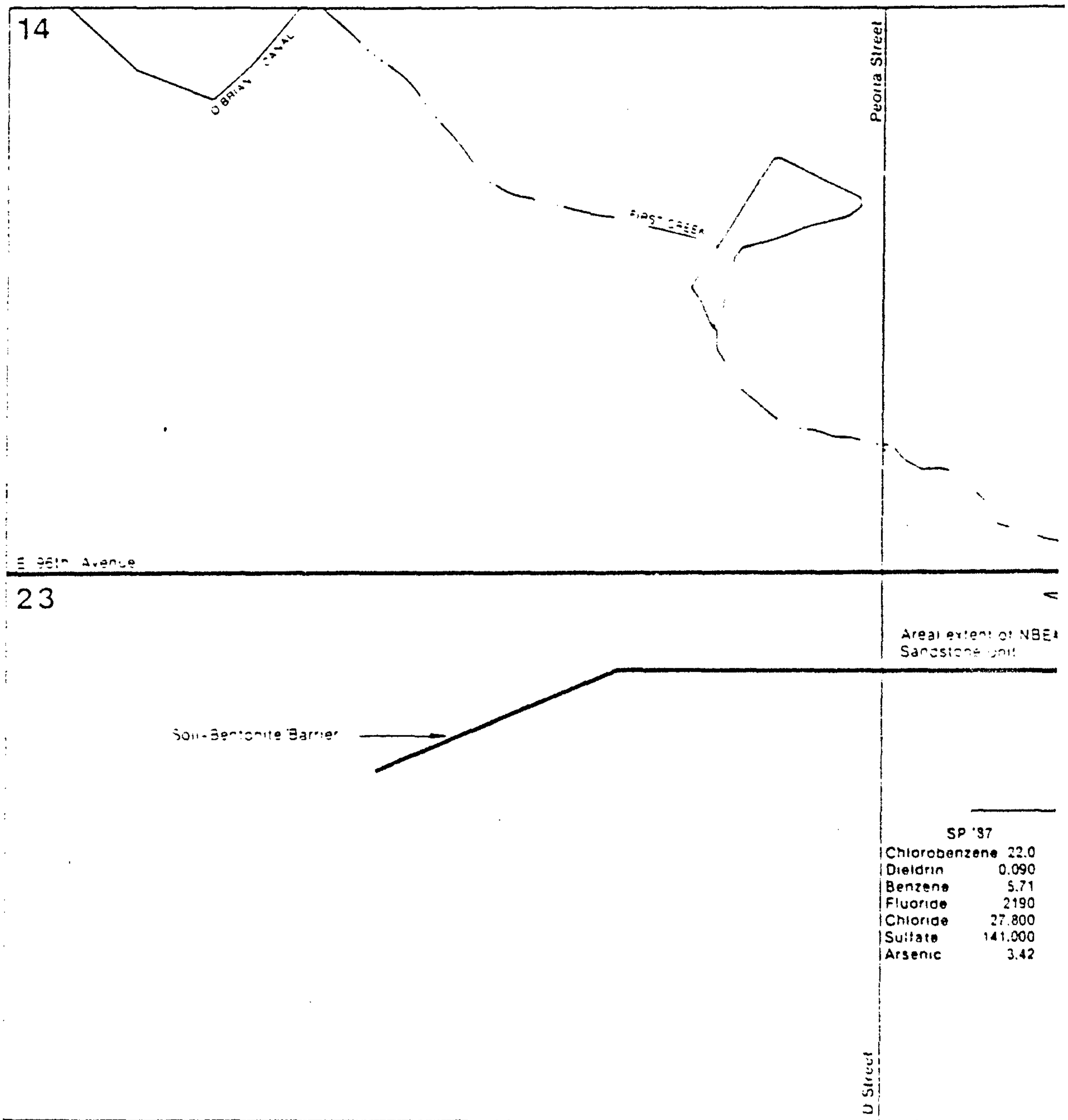
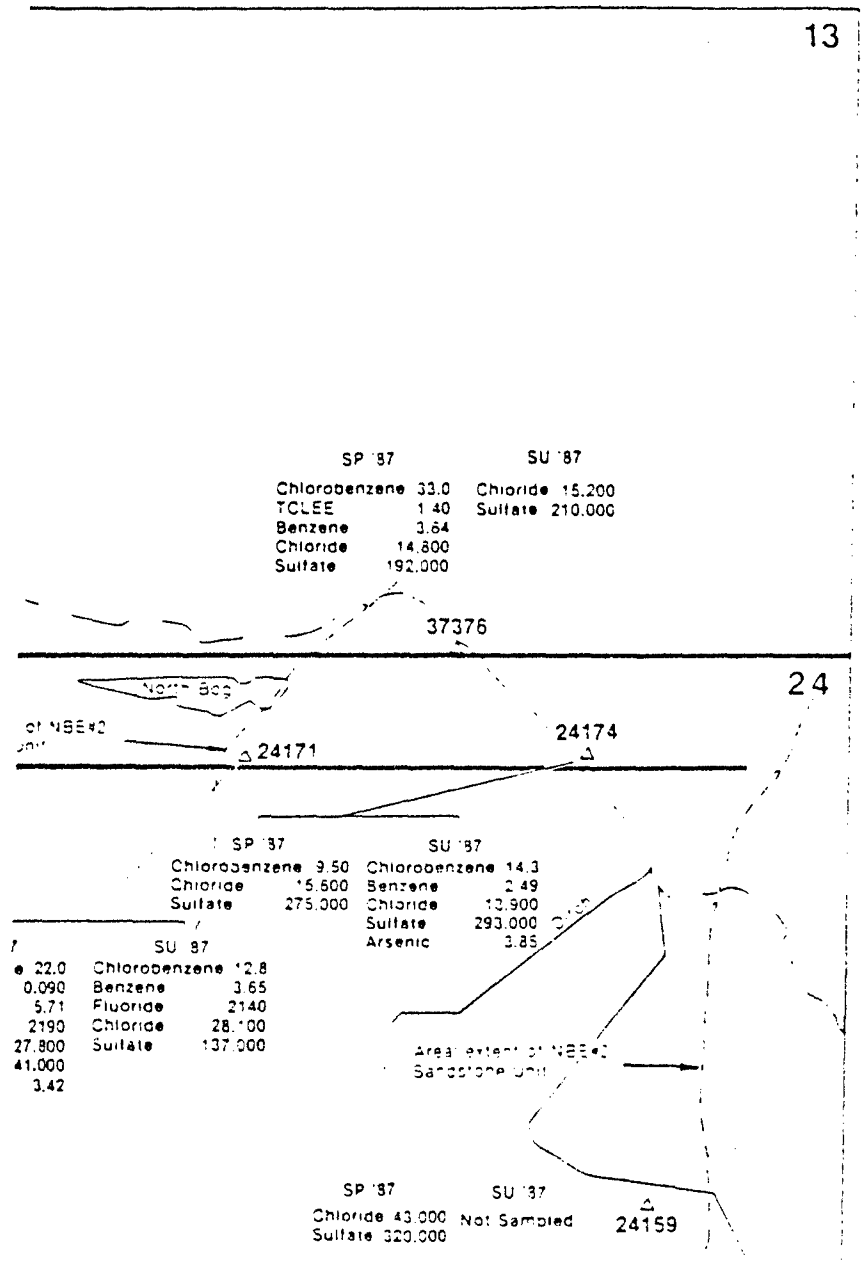


NOTE: Chemical concentrations presented are above certified reporting limits.

Figure F-69

WATER CHEMISTRY DATA FOR DENVER FM UNIT NBE#2
SPRING AND SUMMER QUARTERS, 1987

SOURCE: ESE 1988



EXPLANATION

All concentrations in micrograms per liter (ug/l).

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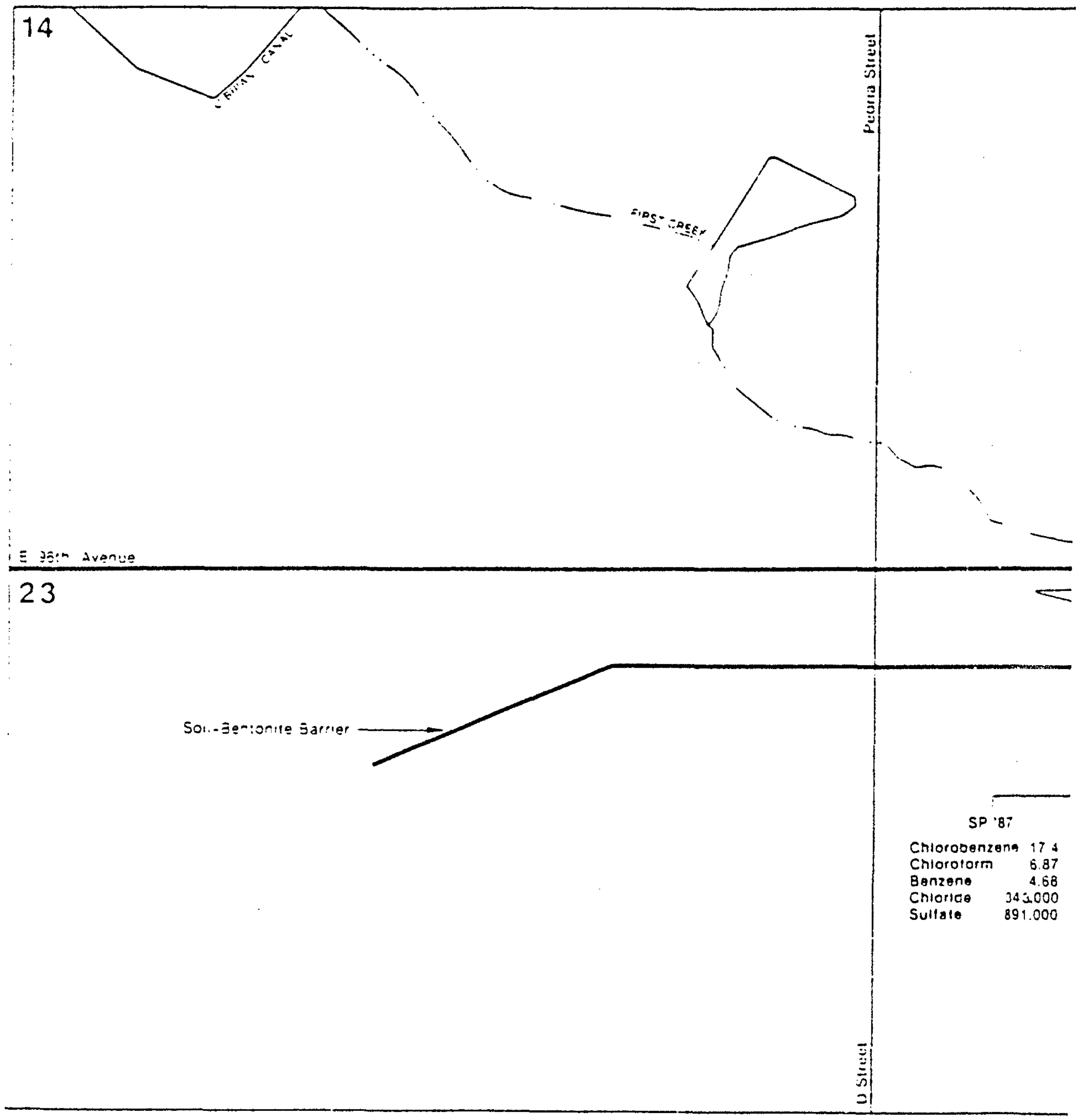
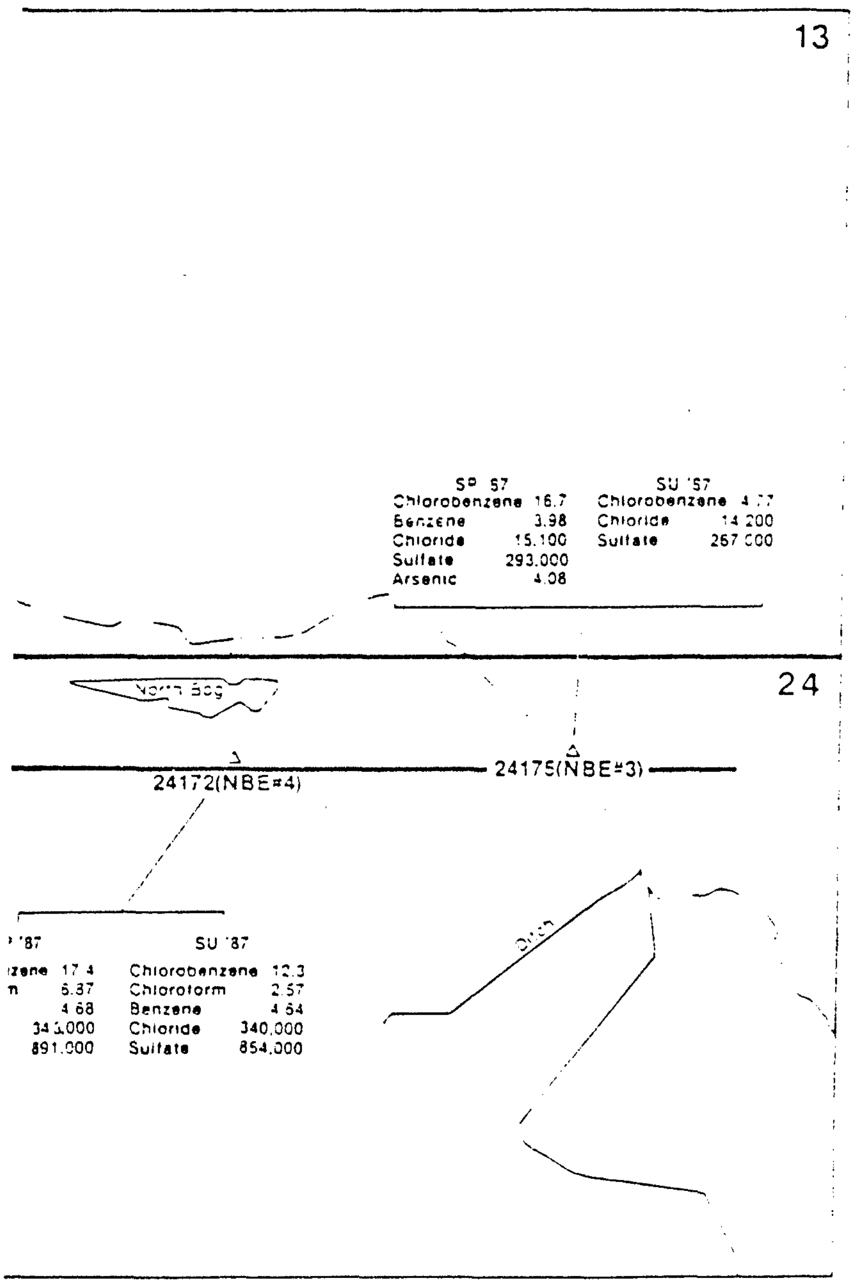


NOTE: Chemical concentrations presented are above certified reporting limits.

Figure F-70

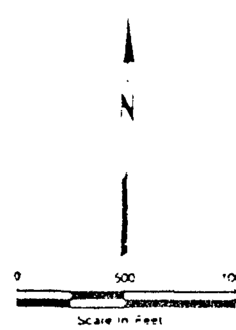
WATER CHEMISTRY DATA FOR DENVER FM UNITS NBE#3 AND NBE#4, SPRING AND SUMMER QUARTERS, 1987

SOURCE: ESE 1988



EXPLANATION

All concentrations in micrograms per liter (ug/l).



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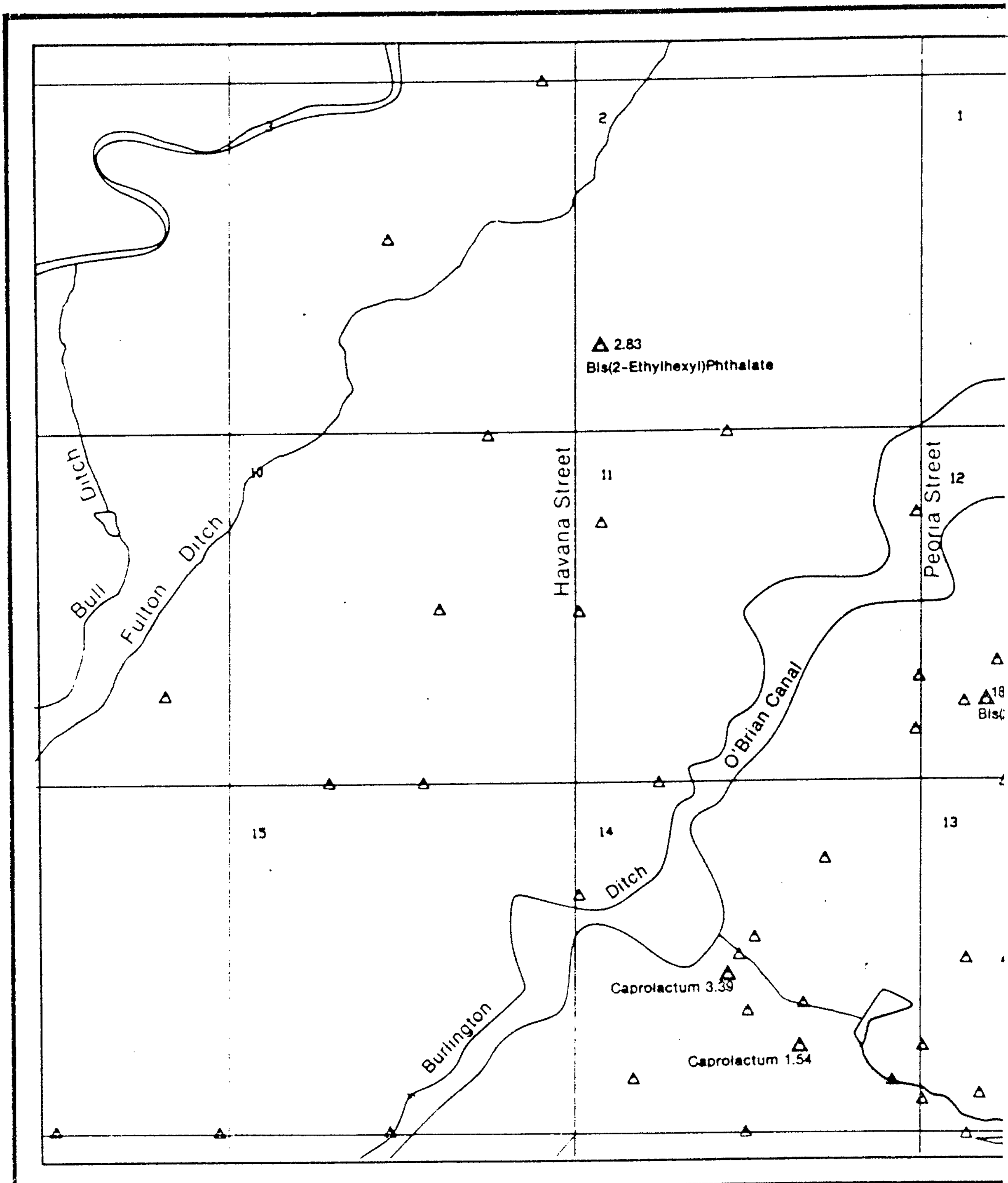
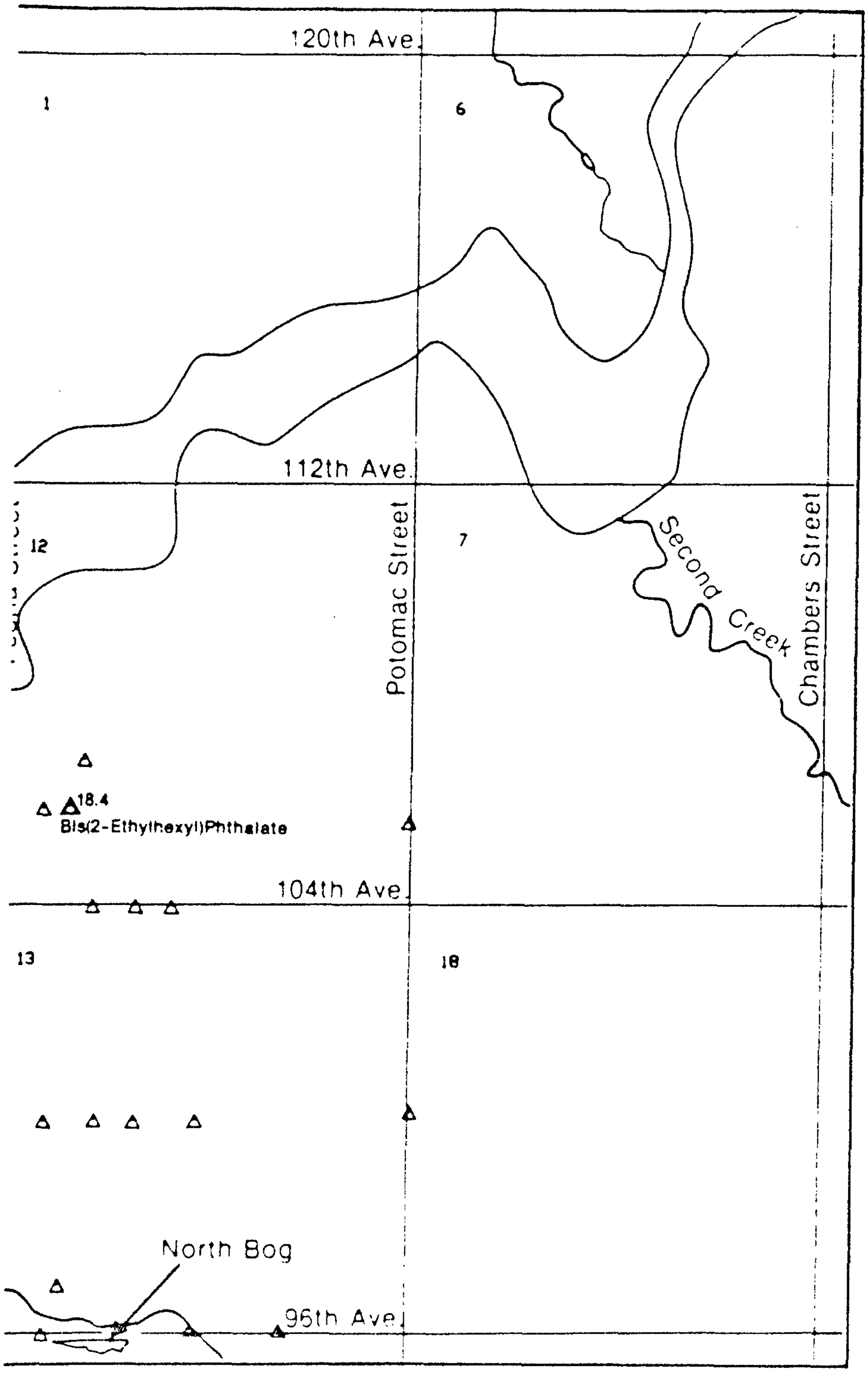


Figure F-71

NONTARGET COMPOUNDS (BIS(2-ETHYLHEXYL)PHTHALATE, CAPROLACTUM) IDENTIFIED BY GC/MS ANALYSIS, ug/l, TASKS 4 AND 44, ALLUVIAL AQUIFER

SOURCE: Hunter/ESE, 1988



EXPLANATION

△

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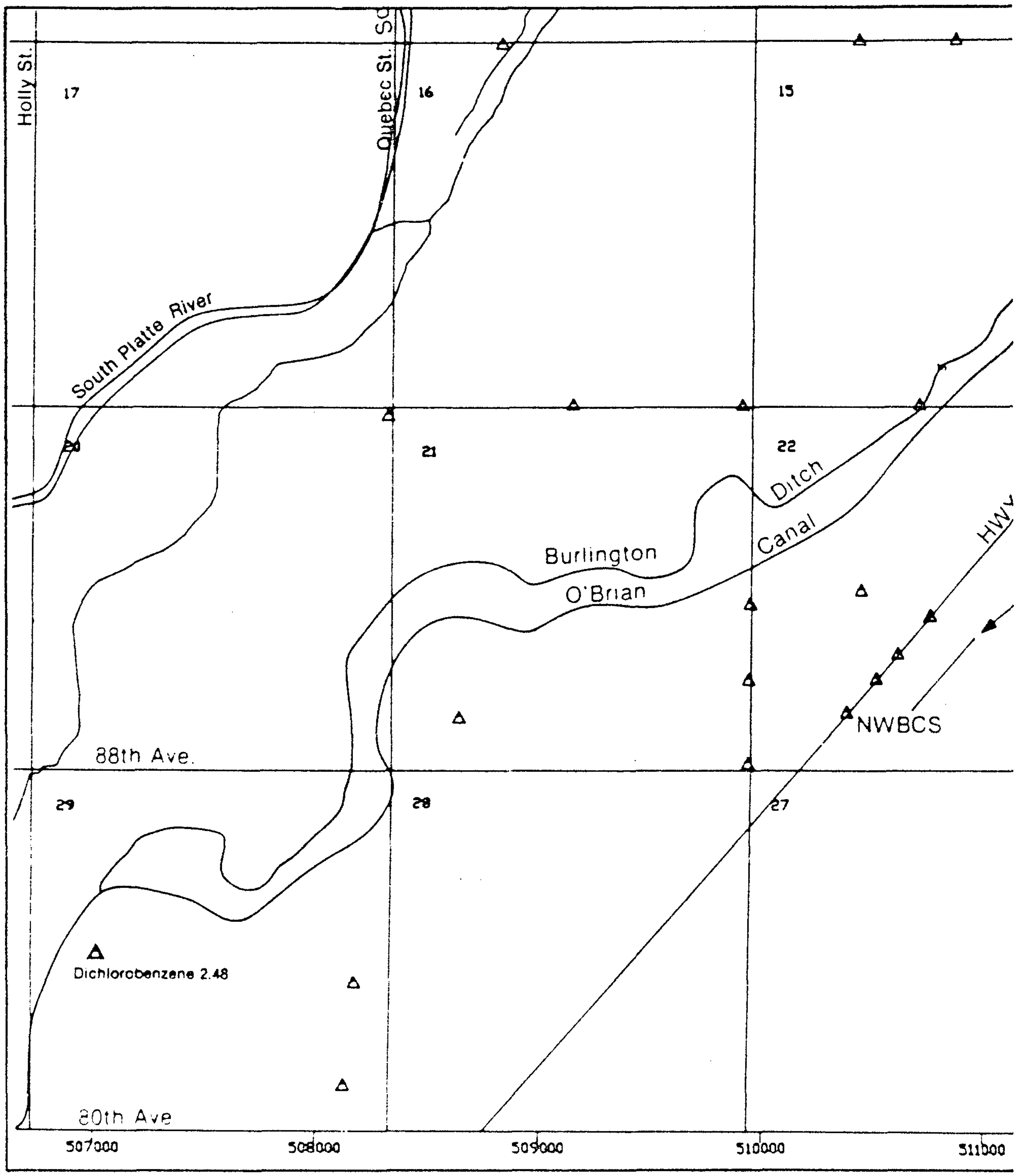
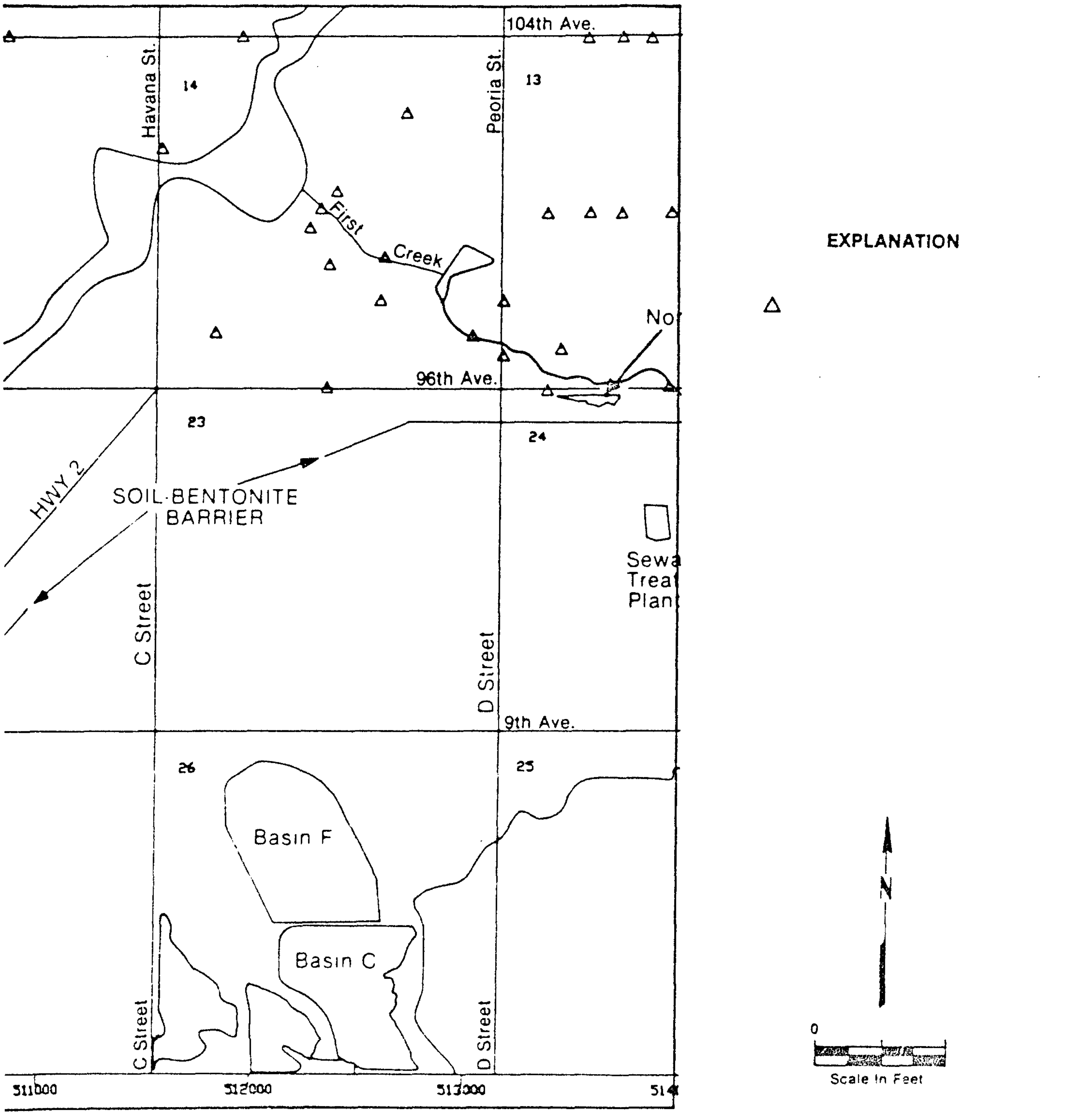


Figure F-72

NONTARGET COMPOUND (DICHLOROBENZENE) IDENTIFIED BY GC/MS ANALYSIS, ug/l, TASK 4 AND 44, ALLUVIAL AQUIFER

SOURCE: Hunter/ESE, 1988



Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal

Aberdeen Proving Ground, Maryland

F.2 WATER QUALITY DATA

GROUND WATER

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37308	ALL	0.0- 0.0	2.0	20.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	1.690	0.604
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	120000.000	111000.000
CCL4	<2.400	<2.400
CD	<5.160	5.470
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	275000.000	267000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	59.100	63.800
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	8.390
DBCP	<0.130	<0.130
DCPD	54.100	30.500
DIMP	78.400	43.700
DITH	<1.100	<1.100
DLDRN	0.291	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	2090.000	2190.000
HG	<0.240	<0.480
ISODR	<0.060	<0.060
K	4130.000	4640.000
MEC6H5	<1.210	<1.210
MG	68100.000	64400.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	272000.000	276000.000
NIT	667.000	924.000
OXAT	<2.000	<2.000
PB	<18.600	<18.600
PPDDE	<0.053	<0.053
PPDDT	<0.070	<0.070
SO4	430000.000	400000.000
T12DCE	<1.200	<1.200
TCLEE	14.400	9.360
TRCLE	<1.100	<1.100
XYLEN	<2.470	<2.470
ZN	21.600	23.400

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37309	ALL	0.0- 0.0	2.0	23.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	6.270	4.150
ALDRN	<0.700	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	144000.000	117000.000
CCL4	<2.400	<2.400
CD	<5.160	5.470
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	624000.000	444000.000
CL6CP	<0.700	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	27.100	55.500
CPMSO2	32.600	39.300
CR	<5.960	.
CU	<7.940	26.000
DBCP	0.176	0.229
DCPD	475.000	522.000
DIMP	820.000	765.000
DITH	6.480	5.930
DLDRN	<0.600	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<76.000
ENDRN	0.520	<0.052
ETC6H5	<1.280	<1.230
FL	2790.000	3060.000
HG	[illegible]	<0.480
ISODR	<0.600	<0.060
K	[illegible]	[illegible]
MEC6H5	[illegible]	<1.210
MG	[illegible]	[illegible]
MIBK	[illegible]	<12.000
MXYLEN	[illegible]	[illegible]
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T13DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37312	ALL	0.0- 0.0	2.0	13.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	135000.000	116000.000
CCL4	<2.400	<2.400
CD	<5.160	5.470
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	258000.000	228000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	1.520	0.135
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	1.510	<0.052
ETC6H5	<1.280	<1.280
FL	2090.000	2310.000
HG	<0.240	<0.480
ISODR	<0.060	<0.060
K	2430.000	4040.000
MEC6H5	<1.210	<1.210
MG	72500.000	61700.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	[illegible]	[illegible]
NIT	1020.000	[illegible]
OXAT	2.000	2.000
PB	<18.600	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	<0.070	[illegible]
SO4	[illegible]	[illegible]
T12DCE	<1.200	1.200
TCLEE	[illegible]	[illegible]
TRCLE	<1.100	1.100
XYLEN	<2.470	<2.470
ZN	<20.100	140.000

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37313	ALL	0.0- 0.0	2.0	28.8	SS	3	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	0.679
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	270000.000	262000.000
CCL4	<2.400	<2.400
CD	<5.160	5.470
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	730000.000	1130000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	2170.000	3850.000
DITH	8.970	11.000
DLDRN	<0.060	0.086
DMDS	<1.800	<1.800
DMMP	<15.200	<304.000
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	2030.000	2780.000
HG	<0.240	<0.480
ISODR	<0.060	<0.060
K	12300.000	9430.000
MEC6H5	<1.210	1.210
MG	400000.000	117000.000
MIBK	<12.900	<12.000
MXYLEN	<1.350	<1.350
NA	[illegible]	[illegible]
NIT	85.400	[illegible]
OXAT	2.000	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	1.200	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	1.100
XYLEN	[illegible]	2.470
ZN	22.100	34.500

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37316	DEN	88.1- 96.2	4.0	31.0	SH	5	5

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	2.780
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	74500.000	85500.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	27.000	<10.100
DITH	<1.590	<1.590
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2060.000	[illegible]
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.900	<12.900
MXYLEN	<1.040	[illegible]
NA	.	.
NIT	.	.
OXAT	<1.350	[illegible]
PB	.	.
PPDDE	0.046	[illegible]
PPDDT	<0.150	[illegible]
SO4	505000.000	[illegible]
T12DCE	<1.750	[illegible]
TCLEE	2.760	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	<1.340	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37317	DEN	51.2- 60.6	4.0	31.1	SH	5	4

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	56000.000	61800.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.590	<1.590
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	[illegible]	[illegible]
FL	1220.000	1170.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.900	<12.000
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	<1.654	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37318	DEN	41.8- 50.7	4.0	27.0	SH	5	3

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	2.470
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	5.510
CL	44300.000	39000.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	12.000
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.590	<1.590
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	<1000.000	<1000.000
HG	.	.
ISODR	<0.056	<0.055
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.000	<12.000
MXYLEN	<1.040	<1.040
NA	.	.
NIT	.	.
OXAT	1.350	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible].046
PPDDT	[illegible]	[illegible].051
SO4	[illegible]	[illegible]14000.000
T12DCE	<1.750	1.750
TCLEE	2.760	2.760
TRCLE	1.310	<1.310
XYLEN	1.340	<1.340
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37319	DEN	145.4-154.5	4.0	29.0	SH	5	6

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	6.760	9.040
CHCL3	3.100	<1.880
CL	6110.000	5290.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	[illegible]
DITH	<1.590	<1.590
DLDRN	<0.054	0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	0.060
ETC6H5	<0.620	<0.620
FL	[illegible]	[illegible]
HG	.	.
ISODR	[illegible]	0.056
K	.	.
MEC6H5	[illegible]	[illegible]
MG	.	.
MIBK	[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T13DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37320	ALL	22.7- 32.7	4.0	35.0	SS	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	1.750	<1.340
CA	127000.000	122000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	155000.000	150000.000
CL6CP	<0.070	<0.070
CLC6H5	10.000	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	12.100	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	21.500	18.900
DITH	<1.100	<1.100
DLDRN	<0.060	0.140
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	1220.000
HG	<0.480	<0.480
ISODR	<0.060	<0.060
K	2890.000	3350.000
MEC6H5	<1.210	<1.210
MG	44200.000	[illegible]
MIBK	<12.000	<12.000
MXYLEN	<1.350	<1.350
NA	[illegible]	[illegible]
NIT	4200.000	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	413000.000	[illegible]
T12DCE	<1.200	<1.200
TCLEE	<1.300	<1.300
TRCLE	<1.100	<1.100
XYLEN	<2.470	<2.470
ZN	<20.100	<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37321	DEN	64.0- 73.9	4.0	35.0	SS	5	4

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.380	<1.380
CL	16800.000	15700.000
CL6CP	<0.083	<0.083
CLC6H5	3.600	2.980
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.590	<1.590
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<30.400	<15.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	<1000.000	1000.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.000	<12.000
MXYLEN	<1.040	[illegible]
NA	.	.
NIT	.	.
[illegible]	[illegible]	.
PB	.	.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37322	DEN	87.8- 96.9	4.0	35.0	SS	5	5

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	17100.000	16600.000
CL6CP	<0.083	<0.083
CLC6H5	7.740	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.590	<1.590
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	<1000.000	<1000.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	[illegible]
MG	.	.
MIBK	<12.900	[illegible]
MXYLEN	<1.040	<1.040
NA	.	.
NIT	.	.
OXAT	<1.350	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	<0.059	[illegible]
SO4	[illegible]07000.000	[illegible]
T12DCE	<1.750	1.750
TCLEE	2.760	<2.760
TRCLE	<1.310	1.310
XYLEN	<1.340	<1.340
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37323	DEN	16.5- 26.3	4.0	10.0	SH	5	2

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	2.730
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	36.700	42.000
CL	238000.000	286000.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	15.500
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	0.164
DCPD	<9.310	<9.310
DIMP	15.700	76.600
DITH	<1.590	<1.590
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<15.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2310.000	2770.000
HG	.	.
ISODR	[illegible]	[illegible]
K	.	.
MEC6H5	[illegible]	<2.100
MG	.	.
MIBK	[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37327	ALL	29.6- 34.5	4.0	34.9	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	257000.000	250000.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	7.080
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.590	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2700.000	2570.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37330	ALL	37.5- 57.2	4.0	57.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	18.100	17.200
CL	291000.000	319000.000
CL6CP	<0.083	<0.083
CLC6H5	2.690	1.740
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	10.500	10.100
DITH	<1.590	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<30.400	<16.300
ENDRN	<0.060	<0.060
ETC6H5	0.620	<0.620
FL	16[illegible]	1620.000
HG	.	.
ISODR	0.[illegible]56	<0.056
K	.	.
MEC6H5	[illegible]	<2.[illegible]
MG	.	.
MIBK	<12.[illegible]	<12.000
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	1.[illegible]	1.750
TCLEE	[illegible]	2.760
TRCLE	[illegible]	1.310
XYLEN	[illegible]	1.340
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37331	ALL	39.6- 48.6	4.0	48.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	25.800	19.900
CL	327000.000	338000.000
CL6CP	<0.083	<0.083
CLC6H5	6.590	1.660
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.590	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.520	<0.620
FL	1730.000	1550.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.000	<12.000
MXYLEN	<1.040	1.040
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	178000.000
T12DCE	<1.750	<1.750
TCLEE	<2.760	2.760
TRCLE	<1.310	[illegible]
XYLEN	<1.340	1.340
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37332	ALL	46.9- 51.4	4.0	51.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	4.500	5.800
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	116000.000	96700.000
CCL4	<2.400	<2.400
CD	<5.160	5.470
CH2CL2	<5.000	<5.000
CHCL3	<1.400	3.390
CL	714000.000	609000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	3.220
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	41.300
DBCP	<0.130	<0.130
DCPD	<0.310	<0.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	0.711	1.020
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	2540.000	2510.000
HG	<0.240	<0.480
ISODR	<0.[illegible]	<0.060
K	[illegible]	3780.000
MEC6H5	[illegible]	<1.2[illegible]
MG	[illegible]	34200.000
MIBK	<12.[illegible]	<12.[illegible]
MXYLEN	[illegible]	<1.[illegible]
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
[illegible]	[illegible]	1.200
[illegible]	[illegible]	[illegible]
TRCLE	[illegible]	<1.100
XYLEN	[illegible]	2.472
ZN	131.000	54.000

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37333	ALL	38.4- 47.7	4.0	47.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	4.800
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	80100.000	85700.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	13.500	11.600
CL	394000.000	372000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	0.205	0.226
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.480
ISODR	<0.060	[illegible]
K	4740.000	5580.000
MEC6H5	<1.210	<1.210
MG	10500.000	13800.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	[illegible]3000.000	247[illegible]
NIT	3330.000	[illegible]
OXAT	2.000	[illegible]
PB	18.000	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]57000.000	153000.000
T13DCE	<1.200	1.200
TCLEE	[illegible]	[illegible]
TRCLE	<1.100	<1.100
XYLEN	2.470	<2.470
ZN	<20.100	33.600

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37334	ALL	42.3- 67.3	4.0	64.0	SH	2	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	72000.000	76900.000
CL6CP	<0.083	<0.083
CLC6H5	3.710	2.310
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.500	<3.340
DLDRN	0.162	0.154
DMDS	<1.160	<1.160
DMMP	<30.400	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	<1000.000	<1000.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	[illegible]	<12.900
MXYLEN	[illegible]	<1.040
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37335	ALL	38.2- 57.6	4.0	51.0	SH	3	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	1.740	<1.340
CA	69800.000	67400.000
CCL4	<2.400	<2.400
CD	<5.160	5.470
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	112000.000	111000.000
CL6CP	<0.070	<0.070
CLC6H5	8.550	1.650
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	0.065	0.328
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.480
ISODR	<0.060	<0.060
K	2430.000	2920.000
MEC6H5	<1.210	<1.210
MG	13600.000	13000.000
MIBK	<12.000	<12.000
MXYLEN	<1.350	<1.350
NA	30000.000	[illegible]
NIT	255.000	[illegible]
[illegible]	[illegible]	[illegible]
PB	<18.600	[illegible]
PPDDE	<0.052	[illegible]
PPDDT	<0.076	[illegible]
SO4	54400.000	51000.000
T12DCE	<1.200	<1.200
TCLEE	<1.300	<1.300
TRCLE	<1.100	<1.100
XYLEN	<2.470	<2.470
ZN	39.800	21.400

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37336	ALL	19.3- 38.9	4.0	39.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	2.230	5.410
CL	225000.000	226000.000
CL6CP	<0.083	<0.083
CLC6H5	6.910	2.520
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<1.590	<3.340
DLDRN	0.082	<0.054
DMDS	1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	0.620	<0.620
FL	1360.000	1590.000
HG	.	.
ISODR	0.056	<0.056
K	.	.
MEC6H5	[illegible]	2.[illegible]
MG	.	.
MIBK	<[illegible]	<12.[illegible]
MXYLEN	1.[illegible]	1.[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T13DCE	[illegible]	1.[illegible]
TCLEE	[illegible]	2.[illegible]
TRCLE	[illegible]	<1.[illegible]
XYLEN	[illegible]	1.[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37340	ALL	23.5- 34.1	4.0	32.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	.	<0.070
AS	.	<3.070
BTZ	.	<2.000
C6H6	<1.340	<1.340
CA	.	149000.000
CCL4	<2.400	<2.400
CD	.	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	.	220000.000
CL6CP	.	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	.	<1.300
CPMSO	.	<4.200
CPMSO2	.	<4.700
CR	.	.
CU	.	<7.940
DBCP	<0.130	<0.130
DCPD	.	<0.310
DIMP	.	35.300
DITH	.	<1.100
DLDRN	.	<0.060
DMDS	.	1.800
DMMP	.	<15.200
ENDRN	.	0.164
ETC6H5	<1.280	<1.280
FL	.	[illegible]
HG	.	<0.480
ISODR	.	[illegible]
K	.	[illegible]
MEC6H5	[illegible]	[illegible]
MG	.	[illegible]
MIBK	.	[illegible]
MXYLEN	[illegible]	[illegible]
NA	.	[illegible]
NIT	.	[illegible]
OXAT	.	[illegible]
PF	.	[illegible]
PPDDE	.	[illegible]
PPDDT	.	[illegible]
SO4	.	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37339	ALL	11.7- 22.3	4.0	20.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	3.500
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	537000.000	668000.000
CCL4	<2.400	<2.400
CD	<5.160	9.500
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	2020000.000	1990000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	9.820
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	515.000	546.000
DITH	<1.100	<1.100
DLDRN	<0.060	0.128
DMDS	<1.300	<1.300
DMMP	<15.200	<76.000
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	4230.000	4650.000
HG	<0.240	<0.480
ISODR	<0.060	<0.060
K	3510.000	3510.000
MEC6H5	<1.210	<1.210
MG	167000.000	174000.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	<0.070	[illegible]
SO4	[illegible]	[illegible]
T12DCE	<1.200	<1.200
TCLEE	[illegible]	[illegible]
TRCLE	<1.100	1.100
XYLEN	[illegible]	2.470
ZN	93.900	152.000

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37341	ALL	20.3- 50.7	4.0	48.0	SS	2	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	65300.000	70500.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	47500.000	50500.000
CL6CP	<0.070	<0.070
CLC6H5	2.420	0.807
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	.
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<30.400	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	[illegible]	[illegible]
HG	[illegible]	<0.240
ISODR	[illegible]	0.060
K	[illegible]	[illegible]
MEC6H5	[illegible]	[illegible]
MG	[illegible]	[illegible]
MIBK	[illegible]	[illegible]
MXYLEN	<1.350	<1.350
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T13DCE	<1.200	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	18.000

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37342	ALL	12.9- 29.0	4.0	27.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	1.470	1.110
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	311000.000	287000.000
CCL4	<2.400	<2.400
CD	<5.160	5.470
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	576000.000	586000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	[illegible]	[illegible]
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	[illegible]
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	[illegible]	14.000
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.300	<1.300
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	[illegible]	[illegible]
FL	[illegible]	[illegible]
HG	[illegible]	[illegible]
ISODR	[illegible]	[illegible]
K	[illegible]	6600.000
[illegible]	[illegible]	[illegible]
MG	[illegible]	65700.000
MIBK	[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37343	ALL	3.7- 35.1	4.0	25.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	2.240	0.801
ALDRN	<0.070	<0.070
AS	3.900	4.300
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	144000.000	119000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	333000.000	223000.000
CL6CP	<0.070	<0.070
CLC6H5	8.930	3.090
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	11.100
CU	26.700	<7.940
DBCP	<0.130	<0.130
DCPD	16.800	11.900
DIMP	966.000	468.000
DITH	1.830	1.900
DLDRN	<0.060	<0.060
DMDS	<1.300	<1.800
DMMP	<152.000	<76.000
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1600.000	175[illegible]
HG	<0.240	<0.480
ISODR	[illegible]	0.060
K	4590.000	5580.000
MEC6H5	1.21[illegible]	1.210
MG	540[illegible]	50200.000
MIBK	12.900	<12.900
MXYLEN	<1.350	1.350
NA	270000.000	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	15.[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	0.070
SO4	[illegible]	155000.[illegible]
T12DCE	<1.200	1.200
TCLEE	[illegible]	[illegible]
TRCLE	<1.100	1.100
XYLEN	[illegible]	[illegible]
ZN	24.400	[illegible]5.000

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37344	ALL	15.5- 40.9	4.0	42.0	SS	2	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<17.000
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	13.700	<6.100
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	1.720	<1.340
CA	177000.000	183000.000
CCL4	9.880	<24.000
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	1370.000	1180.000
CL	402000.000	427000.000
CL6CP	<0.070	<0.070
CLC6H5	6.530	5.900
CLDAN	.	.
CPMS	3.290	<1.300
CPMSO	110.000	101.000
CPMSO2	<4.700	<4.700
CR	<5.960	17.300
CU	22.100	<7.940
DBCP	10.600	13.300
DCPD	<9.310	<9.310
DIMP	1160.000	1030.000
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.300	<1.300
DMMP	<380.000	<152.000
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1350.000	[illegible]
HG	<0.480	<0.4[illegible]
ISODR	[illegible]	<0.060
K	4740.000	4210.000
MEC6H5	[illegible]	[illegible]
MG	48800.000	51700.000
MIBK	<12.000	<12.000
MXYLEN	1.250	[illegible]
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37345	ALL	16.4- 37.1	4.0	37.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	3.100
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	74700.000	83000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	52000.000	60500.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	7.630
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1270.000	1240.000
HG	<0.240	0.480
ISODR	<0.060	[illegible]
K	1660.000	3180.000
MEC6H5	1.210	1.210
MG	16200.000	17900.000
MIBK	<12.900	12.900
MXYLEN	<1.350	<1.350
NA	69500.000	73500.000
NIT	568.000	[illegible]
OXAT	[illegible]	[illegible]
PB	18.000	[illegible]
PPDDE	0.053	[illegible]
PPDDT	0.070	[illegible]
SO4	153000.000	[illegible]
T13DCE	<1.200	1.200
TCLEE	<1.300	1.300
TRCLE	<1.100	1.100
XYLEN	<2.470	<2.470
ZN	77.100	100.000

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37346	ALL	8.6- 24.0	4.0	24.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	3.200
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	91800.000	48700.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	73900.000	40900.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	<5.960
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	52.200	10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	1.230	<1.230
FL	1220.000	1300.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	3660.000	2670.000
MEC6H5	[illegible]	[illegible]
MG	17200.000	10500.000
MIBK	<12.900	<12.000
MXYLEN	<1.250	<1.250
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	12.800	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37347	ALL	23.2- 33.8	4.0	33.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	70500.000	72000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	55500.000	54900.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	6.940
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	33.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	3050.000	3440.000
MEC6H5	<1.210	<1.210
MG	16000.000	17800.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	69500.000	69100.000
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	<1.200	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	52.200	51.200

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37348	ALL	16.4- 42.0	4.0	41.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	148000.000	191000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	2.200
CL	189000.000	325000.000
CL6CP	<0.070	<0.070
CLC6H5	2.050	1.260
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	15.300
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1470.[illegible]	1360.000
HG	[illegible]0.480	<0.430
ISODR	[illegible]	<0.060
K	2430.[illegible]	3520.000
MEC6H5	[illegible]	[illegible]1.210
MG	51[illegible]	46100.000
MIBK	[illegible]	[illegible]2.900
MXYLEN	[illegible]1.350	<1.350
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PP	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]1.200	<1.200
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	1.[illegible]
XYLEN	[illegible]	[illegible]
ZN	34.[illegible]	20.[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37349	ALL	23.2- 43.6	4.0	44.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	181000.000	101000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	277000.000	115000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	12.500
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	456.000	78.400
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1250.000	1290.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	3050.000	2500.000
MEC6H5	<1.210	<1.210
MG	47100.000	25600.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	[illegible]	21500.000
NIT	<790.000	5650.000
OXAT	<2.000	<2.000
PB	18.600	12.600
PPLDE	0.351	0.053
PPLDT	[illegible]	[illegible]
SO4	[illegible]	176000.000
T12DCE	<1.200	1.220
TCLEE	<1.300	<1.300
TRCLE	<1.100	1.100
XYLEN	2.170	2.470
ZN	116.000	73.800

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37350	ALL	26.9- 52.3	4.0	52.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	114000.000	113000.000
CCL4	<2.400	<2.400
CD	<5.160	5.260
CH2CL2	<5.000	<5.000
CHCL3	2.120	<1.400
CL	86100.000	85000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	0.853
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	15.300
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	16.600	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.480	<0.240
ISODR	<0.060	<0.060
K	3660.000	4120.000
MEC6H5	<1.210	<1.210
MG	[illegible]	[illegible]
MIBK	[illegible]	<12.000
MXYLEN	<1.350	<1.350
NA	[illegible]	[illegible]
NIT	7010.000	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T13DCE	[illegible]	<1.200
TCLEE	[illegible]	1.200
TRCLE	[illegible]	<1.100
XYLEN	<2.470	<2.470
ZN	<20.100	<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37351	ALL	17.9- 38.5	4.0	36.0	SS	2	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	139000.000	114000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	128000.000	123000.000
CL6CP	<0.070	<0.070
CLC6H5	<1.730	1.600
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	8.330
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	12.400	10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<30.400	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1630.000	1720.000
HG	<0.480	<0.240
ISODR	<0.060	0.260
K	1840.000	2500.000
MEC6H5	[illegible]	[illegible]
MG	[illegible]	[illegible]
MIBK	[illegible]	[illegible]
MXYLEN	<1.350	[illegible]
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	.	[illegible]
SO4	[illegible]	[illegible]
T12DCE	<1.200	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	<1.100	[illegible]
XYLEN	[illegible]	2.470
ZN	20.100	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37352	ALL	29.8- 38.3	4.0	37.9	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	112000.000	92500.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	9.970	<5.000
CHCL3	<1.400	<1.400
CL	82200.000	78400.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.060	[illegible]
CU	<7.940	8.330
DBCP	[illegible]	<7.940
DCPD	[illegible]	[illegible]
DIMP	[illegible]	[illegible]
DITH	[illegible]	[illegible]
DLDRN	[illegible]	[illegible]
DMDS	[illegible]	[illegible]
DMMP	15.200	[illegible]
ENDRN	[illegible]	15.200
ETC6H5	[illegible]	[illegible]
FL	[illegible]	[illegible]
HG	[illegible]	[illegible]
ISODR	[illegible]	[illegible]
K	[illegible]	[illegible]
MEC6H5	[illegible]	[illegible]
MG	[illegible]	[illegible]
MIBK	[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
PB	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37353	ALL	27.1- 42.4	4.0	44.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	119000.000	117000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	119000.000	103000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	11.100
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	103.000	73.700
DITH	<1.100	<1.100
DLDRN	0.156	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1220.000	<1220.000
HG	0.240	<0.240
ISODR	<0.060	<0.060
K	1690.000	[illegible]
MEC6H5	[illegible]	[illegible]
MG	[illegible]	32400.000
MIBK	[illegible]	[illegible]
MXYLEN	1.350	[illegible]
NA	[illegible]	[illegible]
NIT	4030.000	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	<1.200	<1.200
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	97.000	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37354	ALL	13.8- 49.1	4.0	49.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	1.510	<1.340
CA	108000.000	77100.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	3.380	<1.400
CL	87300.000	65700.000
CL6CP	<0.070	<0.070
CLC6H5	7.340	0.622
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	<4.700
CU	<7.940	8.330
DBCP	<0.130	<7.940
DCPD	<9.310	<0.130
DIMP	[illegible]	<9.310
DITH	<1.100	<10.500
DLDRN	<0.060	<1.100
DMDS	<1.800	<0.060
DMMP	<15.200	<1.800
ENDRN	<0.052	<15.200
ETC6H5	<1.230	<0.052
FL	1300.000	<1.230
HG	<0.480	1280.000
ISODR	[illegible]	<0.240
K	2150.000	<0.060
MEC6H5	[illegible]	2500.000
MG	[illegible]	[illegible]
MIBK	[illegible]	21000.000
MXYLEN	1.350	<12.900
NA	[illegible]	1.350
NIT	7750.000	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T13DCE	[illegible]	[illegible]
TCLEE	[illegible]	1.200
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	1.100
ZN	22.600	[illegible]
		<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37355	ALL	11.1- 71.7	4.0	70.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	9.590	29.400
112TCE	<1.000	<1.000
11DCE	<1.100	2.670
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	148000.000	134000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	3.250	2.360
CL	196000.000	203000.000
CL6CP	<0.070	<0.070
CLC6H5	5.790	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	<4.700
CU	11.100	11.100
DBCP	<0.130	<7.940
DCPD	<9.310	<0.130
DIMP	<10.500	<9.310
DITH	<1.100	<10.500
DLDRN	0.116	<1.100
DMDS	<1.300	0.087
DMMP	<15.200	<1.800
ENDRN	<0.052	<15.200
ETC6H5	<1.280	<0.052
FL	1640.000	<1.280
HG	<0.240	1630.000
ISODR	<0.060	<0.240
K	2000.000	<0.060
MEC6H5	<1.210	3090.000
MG	37[illegible].000	1.210
MIBK	12.000	352[illegible].000
MXYLEN	<1.350	12.000
NA	157[illegible]	1.350
NIT	6270.000	155[illegible]
[illegible]KAT	[illegible]	648[illegible].000
PB	24.5[illegible]	[illegible]
PPDDE	0.053	14.600
PPDDT	[illegible]	0.053
SO4	[illegible]	[illegible]
T12DCE	1.200	[illegible]0.000
TCLEE	1.480	1.200
TRCLE	<1.100	5.520
XYLEN	2.470	2.120
ZN	35.200	2.470
		<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37356	ALL	8.3- 38.4	4.0	38.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	106000.000	109000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	95000.000	105000.000
CL6CP	<0.070	<0.070
CLC6H5	7.390	1.720
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	9.020
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	57.400	54.100
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	3390.000	2520.000
MEC6H5	1.210	<1.210
MG	25900.000	27300.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	1.350
NA	[illegible]	122000.000
NIT	4680.000	6770.000
OXAT	2.000	[illegible]
FE	<18.800	[illegible]
PPDDE	<0.053	<0.053
PPDDT	[illegible]	[illegible]
SO4	155000.000	136000.000
T12DCE	<1.200	[illegible]
TCLEE	[illegible]	1.300
TRCLE	<1.100	1.100
XYLEN	<2.470	<2.470
ZN	29.900	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37357	ALL	4.5- 19.7	4.0	19.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	121000.000	82400.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	24.300	4.680
CL	126000.000	84500.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	1.100
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	13.900
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	29.600	16.200
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	5640.000	6670.000
MEC6H5	<1.210	<1.210
MG	32900.000	22500.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.250
NA	137000.000	98500.000
NIT	10300.000	10700.000
OXAT	<2.000	[illegible]
PB	<18.600	[illegible]
PPDDE	<0.053	<0.053
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	<2.470	[illegible]
ZN	67.400	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37358	ALL	44.3- 59.9	4.0	59.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	135000.000	121000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	73800.000	78000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	8.330
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	2150.000	2360.000
MEC6H5	<1.210	<1.210
MG	15000.000	14900.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	72200.[illegible]	70400.[illegible]
NIT	3460.[illegible]	2410.[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37359	ALL	23.2- 43.7	4.0	42.9	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	3.700	4.540
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	2.310	1.950
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	229000.000	187000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	134000.000	129000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	1.010
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	11.100
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	4470.000	5580.000
MEC6H5	<1.210	1.210
MG	31800.000	26200.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	1.350
NA	165000.000	142000.[illegible]
NIT	3060.000	5[illegible]
OXAT	<2.000	[illegible]
PB	[illegible]	[illegible]
PPDDE	<0.053	[illegible].053
PPDDT	0.07[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible].750	[illegible]
TRCLE	5.130	5.560
XYLEN	2.470	[illegible]
ZN	<20.100	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37360	ALL	26.4-101.9	4.0	101.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	137000.000	120000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	62200.000	63300.000
CL6CP	<0.070	<0.070
CLC6H5	7.520	1.360
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	9.710
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	2920.000	2840.000
MEC6H5	<1.210	<1.210
MG	14900.000	12500.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	71900.000	65100.000
NIT	8900.000	8940.000
OXAT	<2.000	<2.000
PB	13.600	27.400
PPDDE	<0.053	<0.053
PPDDT	<0.070	<0.070
SO4	132000.000	130000.000
T12DCE	<1.200	<1.200
TCLEE	<1.300	<1.300
TRCLE	<1.100	<1.100
XYLEN	<2.470	<2.470
ZN	<20.100	<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37361	ALL	21.7- 92.3	4.0	92.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	1.530	<1.340
CA	120000.000	95300.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	62300.000	51100.000
CL6CP	<0.070	<0.070
CLC6H5	7.760	1.550
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	11.800
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	2000.000	3350.000
MEC6H5	<1.210	<1.210
MG	15600.000	14600.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	81100.000	65000.000
NIT	7390.000	[illegible]
OXAT	<2.000	<2.000
PB	<18.600	[illegible]
PPDDE	<0.053	<0.053
PPDDT	<0.070	<0.070
SO4	143000.000	126000.000
T12DCE	<1.200	<1.200
TCLEE	<1.300	<1.300
TRCLE	<1.100	<1.100
XYLEN	2.470	2.470
ZN	22.800	<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37362	ALL	34.5- 45.2	4.0	42.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	158000.000	147000.000
CCL4	<2.400	<2.400
CD	<5.160	5.260
CH2CL2	<5.000	<5.000
CHCL3	<1.400	1.320
CL	234000.000	231000.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	18.000
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1770.000	1760.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	2460.000	3350.000
MEC6H5	<1.210	<1.210
MG	53800.000	47400.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	214000.000	269000.000
NIT	1700.000	1760.000
OXAT	<2.[illegible]	2.000
PB	18.6[illegible]	18.600
PPDDE	0.053	<0.053
PPDDT	0.070	0.070
SO4	449000.000	450000.000
T12DCE	<1.200	<1.200
TCLEE	1.3[illegible]	<1.300
TRCLE	[illegible]	1.100
XYLEN	2.47[illegible]	2.470
ZN	55.100	74.300

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37363	ALL	6.9- 32.2	4.0	32.1	SS	2	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	.
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	105000.000	72700.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	98600.000	86900.000
CL6CP	<0.070	<0.070
CLC6H5	9.420	0.661
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	<5.960
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	2460.000	2190.000
MEC6H5	<1.210	<1.210
MG	23600.000	16200.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	111000.000	85100.000
NIT	870.000	[illegible]
OXAT	<2.000	[illegible]
PB	<3.800	[illegible]
PPDDE	<0.053	<0.053
PPDDT	<0.070	[illegible]
SO4	[illegible]	[illegible]
T12DCE	<1.200	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	<2.470	[illegible]
ZN	<20.100	<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37364	ALL	6.8- 27.3	4.0	28.9	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	6.200	.
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	36200.000	32000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	31800.000	37300.000
CL6CP	<0.070	<0.070
CLC6H5	4.690	1.000
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	8.640
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1200.000	<1220.000
HG	<0.240	<0.240
ISODR	<0.060	<0.060
K	4160.000	4680.000
MEC6H5	<1.210	<1.210
MG	7410.000	5800.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	57400.000	49100.000
NIT	1280.000	[illegible]
OXAT	<2.000	2.000
PB	18.600	18.600
PPDDE	0.051	0.051
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	1.200
TCLEE	[illegible]	1.500
TRCLE	1.100	1.100
XYLEN	2.470	2.470
ZN	20.100	<20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37365	DEN	49.1- 59.7	4.0	33.5	SH	5	4

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	.	<1.700
112TCE	.	<1.000
11DCE	.	<1.100
11DCLE	.	<1.200
12DCLE	.	<0.610
ALDRN	.	<0.070
AS	.	.
BTZ	.	<2.000
C6H6	.	<1.340
CA	.	35000.000
CCL4	.	<2.400
CD	.	<5.160
CH2CL2	.	<5.000
CHCL3	.	<1.400
CL	.	45100.000
CL6CP	.	<0.070
CLC6H5	.	<0.580
CLDAN	.	.
CPMS	.	<1.300
CPMSO	.	<4.200
CPMSO2	.	<4.700
CR	.	<5.960
CU	.	<7.940
DBCP	.	<0.130
DCPD	.	<9.310
DIMP	.	11.500
DITH	.	<1.100
DLDRN	.	<0.060
DMDS	.	<1.800
DMMP	.	<15.200
ENDRN	.	<0.052
ETC6H5	.	<1.280
FL	.	<1220.000
HG	.	<0.240
ISODR	.	<0.060
K	.	<1260.000
MEC6H5	.	<1.210
MG	.	4030.000
MIBK	.	<12.900
MXYLEN	.	<1.350
NA	.	277000.[illegible]
NIT	.	844.[illegible]
OXAT	.	[illegible]
PB	.	[illegible]
PPDDE	.	[illegible]
PPDDT	.	[illegible]
SO4	.	[illegible]
T12DCE	.	[illegible]
TCLEE	.	[illegible]
TRCLE	.	[illegible]
XYLEN	.	[illegible]
ZN	.	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37367	ALL	11.5- 38.4	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	2.920	<1.920
CA	158000.000	161000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	127.000	115.000
CL	201000.000	175000.000
CL6CP	<0.083	<0.083
CLC6H5	9.230	<1.360
CLDAN	<0.152	<0.152
CPMS	4.160	3.280
CPMSO	113.000	92.400
CPMSO2	4.310	4.320
CR	<5.960	<22.500
CU	<7.940	<7.940
DBCP	2.570	2.100
DCPD	<9.310	<9.310
DIMP	397.000	[illegible]
DITH	3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	1.160	<1.160
DMMP	<15.200	<163.000
ENDRN	<0.060	0.060
ETC6H5	<0.620	<0.620
FL	2050.000	1360.000
HG	.	0.500
ISODR	<0.056	<0.056
K	.	3310.000
MEC6H5	<2.100	<2.100
MG	50900.000	50200.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	[illegible]	[illegible]
NIT	[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER
37368	ALL	18.1- 34.3	4.0	0.0		1	SAND

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	2.560	3.060
BTZ	<1.140	<1.140
C6H6	2.630	<1.920
CA	367000.000	361000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	29.900	32.800
CL	690000.000	564000.000
CL6CP	<0.083	<0.083
CLC6H5	11.500	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	1.080
CPMSO	3.430	3.400
CPMSO2	<2.240	<2.240
CR	<5.960	39.700
CU	<7.940	<7.940
DBCP	1.110	0.975
DCPD	<9.310	<9.310
DIMP	55.700	50.800
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.520	<0.520
FL	2580.000	1960.000
HG	[illegible]	<0.500
ISODR	<0.056	0.056
K	[illegible]	4320.000
MEC6H5	<2.100	2.100
MG	96500.000	88800.000
MIBK	<12.000	12.900
MXYLEN	<1.040	[illegible]
NA	38400[illegible]	372[illegible]
NIT	9020.[illegible]	921[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37369	ALL	4.1- 25.2	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	3.000	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	210000.000	245000.000
CL6CP	<0.083	<0.083
CLC6H5	8.880	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	8.590	7.230
CPMSO2	4.110	4.120
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	59.400	48.900
DIMP	[illegible]	287.000
DITH	3.340	<3.240
DLDRN	[illegible]	[illegible].245
DMDS	[illegible]	[illegible].160
DMMP	[illegible]76.000	<163.000
ENDRN	[illegible].424	[illegible]
ETC6H5	[illegible]	[illegible]
FL	[illegible]	[illegible]
HG	.	.
ISODR	[illegible]	[illegible].056
K	.	.
MEC6H5	[illegible]	[illegible]
MG	.	.
MIBK	[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
[illegible]	[illegible]	.
[illegible]	.	.
[illegible]	.	.
[illegible]	.	.
[illegible]	.	.
[illegible]	.	.
[illegible]	.	.
[illegible]	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37370	ALL	4.4- 25.8	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	2.720	3.390
BTZ	<1.140	<1.140
C6H6	8.430	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	568000.000	518000.000
CL6CP	<0.083	<0.083
CLC6H5	27.300	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.230	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	278.000	1130.000
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<76.000	<163.000
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2550.000	2810.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	[illegible]	<2.100
MG	.	.
MIBK	<12.900	<12.900
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
[illegible]	.	.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37371	DEN	28.3- 39.0	4.0	0.0		5	3

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	231000.000	231000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	467000.000	429000.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	<5.960	<5.960
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	16.600
DIMP	1100.000	1480.000
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<163.000
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2590.000	2740.000
HG	[illegible]	[illegible]
ISODR	<0.056	<0.056
K	[illegible]	[illegible]
MEC6H5	<2.1[illegible]	<2.1[illegible]
MG	61900.000	61900.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.04[illegible]
NA	428000.[illegible]	428000.[illegible]
NIT	838.[illegible]	838.[illegible]
OXAT	<1.35[illegible]	[illegible]
PB	<8.[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37372	DEN	61.5- 88.5	0.0	0.0		5	4

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	10.300	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	.	<2.480
CHCL3	<1.880	<1.880
CL	57800.000	59600.000
CL6CP	<0.083	<0.083
CLC6H5	42.400	4.980
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.230	<2.240
CR	.	.
CU	.	.
DBCP	0.207	<0.130
DCPD	<9.310	<9.310
DIMP	.	<10.100
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	.	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2350.000	2530.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.900	<12.900
MXYLEN	<1.040	[illegible]
NA	.	.
NIT	.	.
OXAT	<1.350	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37373	ALL	4.3- 25.7	0.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	18.200	5.170
ALDRN	<0.083	<0.083
AS	3.650	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	329000.000	167000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	744000.000	271000.000
CL6CP	<0.083	<0.083
CLC6H5	3.560	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	4.090	2.220
CPMSO2	16.100	15.100
CR	<5.960	21.000
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	430.000	210.000
DIMP	.	2220.000
DITH	19.300	5.290
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	.	<163.000
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2620.000	1520.000
HG	.	<0.500
ISODR	<0.056	<0.055
K	.	2860.000
MEC6H5	<2.100	<2.100
MG	108000.000	50500.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	589000.000	307[illegible]
NIT	59.600	57.[illegible]
OXAT	5.1[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	467[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	24.[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37374	ALL	8.7- 24.9	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	2.790	2.660
BTZ	<1.140	<1.140
C6H6	2.680	3.320
CA	557000.000	527000.000
CCL4	<1.690	<1.690
CD	<5.160	5.460
CH2CL2	<2.480	<2.480
CHCL3	2.930	3.020
CL	386000.000	716000.000
CL6CP	<0.083	<0.083
CLC6H5	13.300	21.900
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	<5.960	45.700
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	445.000	472.000
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<163.000
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	4170.000	<10000.000
HG	.	<0.500
ISODR	<0.056	<0.056
K	.	1110.000
MEC6H5	<2.100	[illegible]
MG	160000.000	143000.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	754000.000	[illegible]
NIT	938.000	[illegible]
OXAT	<1.350	[illegible]
PB	19.6[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37376	DEN	40.3- 51.0	4.0	0.0		5	3

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	3.640	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	14800.000	15200.000
CL6CP	<0.083	<0.083
CLC6H5	33.000	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	[illegible]	<10.100
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	<1000.000	<1000.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	[illegible]	2.100
MG	.	.
MIBK	<12.900	<12.900
MXYLEN	[illegible]	[illegible]
NA	.	.
NIT	.	.
OXAT	[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	.	.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37377	ALL	22.7- 38.9	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	5.800	<1.920
CA	151000.000	135000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	2.250	<1.880
CL	165000.000	161000.000
CL6CP	<0.083	<0.083
CLC6H5	22.700	3.470
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	3.070	2.540
CPMSO2	<2.240	<2.240
CR	<5.960	6.460
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	63.100	57.400
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2340.000	1850.000
HG	.	0.500
ISODR	<0.056	<0.056
K	.	2810.000
MEC6H5	<2.100	<2.100
MG	56000.000	50600.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.[illegible]
NA	220000.000	[illegible]
NIT	597.000	[illegible]
OXAT	<1.35[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	0.059	[illegible]
SO4	516000.[illegible]	[illegible]
T12DCE	1.75[illegible]	1.75[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	45.[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37378	ALL	23.8- 34.7	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	2.680	<2.500
BTZ	<1.140	<1.140
C6H6	3.140	<1.920
CA	113000.000	117000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	104000.000	89700.000
CL6CP	<0.083	<0.083
CLC6H5	12.600	11.100
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.990	<1.990
CPMSO2	<2.240	<2.240
CR	<5.960	15.000
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	11.600
DITH	<3.340	<3.340
DLDRN	0.073	0.080
DMDS	<1.160	<1.160
DMMP	<15.200	<15.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	1360.000	1680.000
HG	[illegible]	<0.500
ISODR	<0.056	<0.056
K	[illegible]	2040.000
MEC6H5	<2.[illegible]	<2.[illegible]
MG	36800.[illegible]	36300.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	173000.[illegible]	[illegible]4000.[illegible]
NIT	1350.[illegible]	[illegible]25[illegible]
OXAT	<1.35[illegible]	[illegible]
PB	<18.[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	<1.3[illegible]	1.3[illegible]
XYLEN	[illegible]	[illegible]
ZN	<2[illegible]	2[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37379	DEN	39.3- 55.5	4.0	0.0		5	3

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	5.760	<1.920
CA	272000.000	251000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	418000.000	427000.000
CL6CP	<0.083	<0.083
CLC6H5	17.800	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	<5.960	25.400
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	47.100	53.700
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	3000.000	2760.000
HG	.	<0.500
ISODR	<0.056	<0.056
K	.	2330.000
MEC6H5	<2.100	<2.100
MG	41900.000	45100.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	729000.000	577000.000
NIT	2070.000	[illegible]
OXAT	<1.350	[illegible]
PB	<18.600	[illegible]
PPDDE	<0.046	0.046
PPDDT	<0.059	[illegible]
SO4	1450000.000	[illegible]
T12DCE	<1.750	1.750
TCLEE	2.760	[illegible]
TRCLE	1.370	[illegible]
XYLEN	<1.340	1.340
ZN	210.000	37.300

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37380	DEN	64.3- 75.0	4.0	0.0		5	4

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	3.650	<1.920
CA	.	133000.000
CCL4	<1.690	<1.690
CD	.	<5.160
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	412000.000	384000.000
CL6CP	<0.083	<0.083
CLC6H5	15.400	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	12.000
CU	.	<7.940
DBCP	0.191	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	[illegible]
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2100.000	2680.000
HG	[illegible]	<0.500
ISODR	<0.056	<0.056
K	5580.000	3210.000
MEC6H5	<2.100	<2.100
MG	.	5580.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	.	[illegible]
NIT	.	[illegible]
OXAT	[illegible]	[illegible]
PB	.	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	.	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37381	ALL	7.3- 28.5	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	[illegible]	<1.850
11DCLE	<1.930	<1.930
[illegible]	[illegible]	5.280
[illegible]	[illegible]	<0.083
AS	[illegible]	<2.500
[illegible]	[illegible]	<1.140
[illegible]	[illegible]	<1.920
[illegible]	[illegible]	162000.000
[illegible]	[illegible]	<1.690
[illegible]	[illegible]	<5.160
[illegible]	[illegible]	<2.480
[illegible]	[illegible]	<1.880
[illegible]	[illegible]	283000.000
[illegible]	[illegible]	<0.083
[illegible]	[illegible]	3.310
[illegible]	[illegible]	<0.152
[illegible]	[illegible]	<1.080
[illegible]	[illegible]	2.420
[illegible]	[illegible]	13.900
[illegible]	[illegible]	20.200
[illegible]	[illegible]	<7.940
[illegible]	[illegible]	<0.130
[illegible]	[illegible]	236.000
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	5.320
[illegible]	[illegible]	<0.054
[illegible]	[illegible]	1.160
[illegible]	[illegible]	163.000
[illegible]	[illegible]	<0.060
[illegible]	[illegible]	<0.620
[illegible]	[illegible]	2650.000
[illegible]	[illegible]	<0.500
[illegible]	[illegible]	<0.056
K	[illegible]	2810.000
[illegible]	[illegible]	<2.100
MG	[illegible]	49100.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	504000.000	326000.000
NIT		<10.000
OXAT	<1.350	1.830
PB	<13.600	[illegible]
PPDDE	<0.046	<0.046
PPDDT	[illegible]	[illegible]
SO4	1420000.000	503000.000
T12DCE	<1.750	<1.750
TCLEE	[illegible]	7.100
TRCLE	[illegible]	<1.310
XYLEN	[illegible]	[illegible]
ZN	[illegible]	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37382	DEN	33.6- 50.0	4.0	0.0		3	3

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	.	<1.090
112TCE	.	<1.630
11DCE	.	<1.850
11DCLE	.	<1.930
12DCLE	.	<2.070
ALDRN	.	<0.083
AS	.	<2.500
BTZ	.	<1.140
C6H6	.	<1.920
CA	.	.
CCL4	.	<1.690
CD	.	.
CH2CL2	.	<2.480
CHCL3	.	16.600
CL	.	281000.000
CL6CP	.	<0.083
CLC6H5	.	1.870
CLDAN	.	<0.152
CPMS	.	<1.080
CPMSO	.	<1.980
CPMSO2	.	<2.240
CR	.	.
CU	.	.
DBCP	.	<0.130
DCPD	.	<9.310
DIMP	.	10.100
DITH	.	<1.590
DLDRN	.	0.273
DMDS	.	<1.160
DMMP	.	<16.300
ENDRN	.	<0.060
ETC6H5	.	<0.620
FL	.	2340.000
HG	.	.
ISODR	.	<0.056
K	.	.
MEC6H5	.	<2.100
MG	.	.
MIBK	.	<12.900
MXYLEN	.	<1.040
NA	.	.
NIT	.	.
OXAT	.	[illegible]
PB	.	.
PPDDE	.	[illegible]
PPDDT	.	[illegible]
SO4	.	[illegible]
T12DCE	.	[illegible]
TCLEE	.	[illegible]
TRCLE	.	[illegible]
XYLEN	.	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

WELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
37383	ALL	17.6- 39.0	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	3.170	<1.920
CA	162000.000	154000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	131000.000	112000.000
CL6CP	<0.083	<0.083
CLC6H5	11.400	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	<5.960	17.200
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	9.310
DIMP	51.[illegible]	6[illegible]
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
[illegible]	[illegible]	[illegible]
DMMP	15.200	<16.300
ENDRN	<0.[illegible]	<0.360
ETC6H5	<0.620	0.620
FL	1590.000	[illegible]
HG	[illegible]	[illegible]
ISCLP	<0.054	<0.054
K	[illegible]	2960.000
MEC6H5	[illegible]	[illegible]
MG	4000.[illegible]	45[illegible]
MIBK	<12.[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	[illegible]	[illegible]
NIT	228[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

ELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
7385	ALL	29.9-51.5	4.0	51.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87	2ND QUARTER FY88
111TCE	.	.	<1.090
112TCE	.	.	<1.630
11DCE	.	.	<1.850
11DCLE	.	.	<1.930
12DCLE	.	.	<2.070
ALDRN	.	.	<0.083
AS	.	.	<2.500
BTZ	.	.	.
C6H6	.	.	0.860
CA	.	.	.
CCL4	.	.	<1.690
CD	.	.	.
CH2CL2	.	.	17.500
CHCL3	.	.	<2.480
CL	.	.	352000.000
CL6CP	.	.	<0.083
CLC6H5	.	.	7.360
CLDAN	.	.	<0.152
CPMS	.	.	.
CPMSO	.	.	.
CPMSO2	.	.	.
CR	.	.	.
CU	.	.	.
DBCP	.	.	<0.130
DCPD	.	.	.
DIMP	.	.	<10.100
DITH	.	.	.
DLDRN	.	.	<0.054
DMDS	.	.	.
DMMP	.	.	<16.300
ENDRN	.	.	<0.060
ETC6H5	.	.	0.0000
FL	.	.	1340.000
HG	.	.	.
ISODR	.	.	<0.056
K	.	.	.
MEC6H5	.	.	.
MG	.	.	.
MIBK	.	.	.
MXYLEN	.	.	[illegible]
NA	.	.	.
NIT	.	.	.
OXAT	.	.	.
PB	.	.	.
PPDDE	.	.	[illegible]
[illegible]	.	.	[illegible]
SO4	.	.	[illegible]
[illegible]	.	.	[illegible]
[illegible]	.	.	[illegible]
[illegible]	.	.	[illegible]
[illegible]	.	.	[illegible]
[illegible]	.	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

ELL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
386	ALL	39.5- 50.4	4.0	0.0		.	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	.	<1.090
112TCE	.	<1.630
11DCE	.	<1.850
11DCLE	.	<1.930
12DCLE	.	<2.070
ALDRN	.	<0.083
AS	.	4.380
BTZ	.	<1.140
C6H6	.	3.980
CA	.	.
CCL4	.	<1.690
CD	.	.
CH2CL2	.	<2.480
CHCL3	.	10.500
CL	.	502000.000
CL6CP	.	<0.083
CLC6H5	.	6.990
CLDAN	.	<0.152
CPMS	.	<1.080
CPMSO	.	<1.980
CPMSO2	.	<2.240
CR	.	.
CU	.	.
DBCP	.	<0.130
DCPD	.	<9.310
DIMP	.	12.000
DITH	.	<1.590
DLDRN	.	0.472
DMDS	.	<1.160
DMMP	.	<16.300
ENDRN	.	0.067
ETC6H5	.	<0.620
FL	.	3570.000
HG	.	.
ISODR	.	<0.056
K	.	.
MEC6H5	.	<2.100
MG	.	.
MIBK	.	<12.300
MXYLEN	.	[illegible]
NA	.	.
NIT	.	.
OXAT	.	[illegible]
PB	.	.
PPDDE	.	[illegible]
PPDDT	.	[illegible]
SO4	.	[illegible]
T12DCE	.	[illegible]
TCLEE	.	[illegible]
TRCLE	.	[illegible]
XYLEN	.	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

.L #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
187	DEN	36.8- 42.6	4.0	0.0		5	2

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	73.800	<1.920
CA	206000.000	206000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	8.620	<1.880
CL	303000.000	287000.000
CL6CP	<0.083	<0.083
CLC6H5	74.700	<1.360
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	8.140	8.140
CU	<7.940	<7.940
DBCP	0.779	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	10.100
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	1.320	<0.620
FL	3220.000	4820.000
HG	[illegible]	[illegible]
ISODR	<0.056	<0.056
K	[illegible]	[illegible]
MEC6H5	<2.1[illegible]	<2.100
MG	35600.000	35600.000
MIBK	<12.900	<12.900
MXYLEN	1.27[illegible]	<1.[illegible]
NA	[illegible]	[illegible]
NIT	17200.000	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

LL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
388	DEN	69.8- 86.0	4.0	0.0		5	4

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	10.100	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	403000.000	383000.000
CL6CP	<0.083	<0.083
CLC6H5	32.800	2.070
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.230	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.100
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2650.000	3700.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.900	<12.900
MXYLEN	<1.04[illegible]	<1.04[illegible]
NA	.	.
NIT	.	.
OXAT	<1.35[illegible]	[illegible]
PB	.	.
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	1480000.000
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

L #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
89	A/D	8.4- 35.2	4.0	0.0		3	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	141000.000	141000.000
CCL4	<1.690	<1.690
CD	<5.160	<5.160
CH2CL2	<2.480	<2.480
CHCL3	56.500	23.700
CL	217000.000	204000.000
CL6CP	<0.083	<0.083
CLC6H5	2.740	1.720
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	9.520	13.700
CPMSO2	5.490	8.860
CR	<5.960	<5.960
CU	<7.940	<7.940
DBCP	0.400	0.560
DCPD	<9.310	<9.310
DIMP	343.000	312.000
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	<15.200	<163.000
ENDRN	<0.060	0.411
ETC6H5	<0.620	<0.620
FL	2190.000	2810.000
HG		
ISODR	<0.056	<0.056
K		
MEC6H5	<2.100	<2.100
MG	53800.000	53800.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	219000.[illegible]	219000.000
NIT	163.000	163.000
OXAT	<1.250	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
SO4	[illegible]	[illegible]
[illegible]	1.750	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	1.310
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

L #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
90	DEN	40.1- 46.0	4.0	0.0		5	3

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	<2.500	<2.500
BTZ	<1.140	<1.140
C6H6	8.500	<1.920
CA	.	.
CCL4	<1.690	<1.690
CD	.	.
CH2CL2	<2.480	<2.480
CHCL3	<1.880	<1.880
CL	55700.000	72500.000
CL6CP	<0.083	<0.083
CLC6H5	23.700	3.500
CLDAN	<0.152	<0.152
CPMS	<1.080	<1.080
CPMSO	<1.980	<1.980
CPMSO2	<2.240	<2.240
CR	.	.
CU	.	.
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	.	<10.100
DITH	<3.340	<3.340
DLDRN	<0.054	<0.054
DMDS	<1.160	<1.160
DMMP	.	<16.300
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	<1000.000	958.000
HG	.	.
ISODR	<0.056	<0.056
K	.	.
MEC6H5	<2.100	<2.100
MG	.	.
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	.	.
NIT	.	.
OXAT	<1.350	<1.350
PB	.	.
PPDDE	<0.046	<0.046
PPDDT	[illegible]	[illegible]
SO4	242000.000	251000.000
T12DCE	<1.750	<1.750
TCLEE	<2.760	<2.760
TRCLE	<1.310	<1.310
XYLEN	<1.340	<1.340
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

L #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
91	ALL	19.7- 41.1	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	2.260	2.550
ALDRN	<0.083	<0.083
AS	3.320	<2.500
BTZ	<1.140	<1.140
C6H6	<1.920	<1.920
CA	.	220000.000
CCL4	<1.690	<1.690
CD	.	<5.160
CH2CL2	<2.480	<2.480
CHCL3	79.300	92.900
CL	390000.000	494000.000
CL6CP	<0.083	<0.083
CLC6H5	<1.360	<1.360
CLDAN	<0.152	<0.152
CPMS	3.260	2.500
CPMSO	148.000	135.000
CPMSO2	5.920	5.280
CR	.	26.900
CU	.	<7.940
DBCP	4.690	4.370
DCPD	<9.310	<9.310
DIMP	2030.000	2010.000
DITH	<3.340	<3.340
DLDRN	<0.054	0.064
DMDS	<1.160	<1.160
DMMP	<16.300	<163.000
ENDRN	<0.060	<0.060
ETC6H5	<0.620	<0.620
FL	2070.000	3350.000
HG	<0.500	<0.500
ISODR	<0.056	<0.056
K	4840.000	4680.000
MEC6H5	<2.100	<2.100
MG	.	67200.000
MIBK	<12.900	<12.900
MXYLEN	<1.040	<1.040
NA	.	427000.000
NIT	.	2540.000
OXAT	<1.350	<1.35[illegible]
PB	.	<[illegible]
PPDDE	<0.046	[illegible]0.046
PPDDT	[illegible]	[illegible]
SO4	[illegible]74000.000	[illegible].000
T12DCE	1.750	1.750
TCLEE	92.[illegible]	56.000
TRCLE	2.2[illegible]	1.940
XYLEN	1.34[illegible]	1.140
ZN	.	21.000

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

L #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
92	ALL	13.2- 29.4	4.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.090	<1.090
112TCE	<1.630	<1.630
11DCE	<1.850	<1.850
11DCLE	<1.930	<1.930
12DCLE	<2.070	<2.070
ALDRN	<0.083	<0.083
AS	.	<2.500
BTZ	.	<1.140
C6H6	15.100	<1.920
CA	.	141000.000
CCL4	<1.690	<1.690
CD	.	<5.160
CH2CL2	<2.480	<2.480
CHCL3	115.000	<1.880
CL	112000.000	118000.000
CL6CP	<0.203	<0.083
CLC6H5	8.410	<1.360
CLDAN	<0.152	<0.152
CPMS	0.675	<1.080
CPMSO	.	<1.980
CPMSO2	4.490	<2.240
CR	.	19.500
CU	.	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	29.000	15.000
DITH	1.250	<3.340
DLDRN	0.095	<0.054
DMDS	.	<1.160
DMMP	<16.300	<16.300
ENDRN	0.234	<0.060
ETC6H5	1.420	<0.620
FL	1980.000	1690.000
HG	<0.500	<0.500
ISODR	<0.056	<0.056
K	2910.000	.
MEC6H5	<2.100	<2.100
MG	.	47900.000
MIBK	<12.900	<12.900
MXYLEN	1.140	<1.040
NA	.	229000.000
NIT	.	806.000
OXAT	.	1.250
PB	.	<18.500
PPDDE	<0.046	<0.046
PPDDT	<0.150	<0.150
SO4	427000.000	444000.000
T12DCE	<1.750	<1.750
TCLEE	<2.760	<2.760
TRCLE	<1.310	<1.310
XYLEN	<1.040	<1.040
ZN	.	20.100

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

#	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
5	ALL	18.5-45.0	4.0	44.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87	2ND QUARTER FY88
111TCE	.	.	<1.090
112TCE	.	.	<1.630
11DCE	.	.	<1.850
11DCLE	.	.	<1.930
12DCLE	.	.	<2.070
ALDRN	.	.	<0.083
AS	.	.	<2.500
BTZ	.	.	<1.100
C6H6	.	.	<1.920
CA	.	.	.
CCL4	.	.	<1.690
CD	.	.	.
CH2CL2	.	.	<2.480
CHCL3	.	.	3.850
CL	.	.	127000.000
CL6CP	.	.	<0.083
CLC6H5	.	.	<1.360
CLDAN	.	.	<0.152
CPMS	.	.	<1.080
CPMSO	.	.	<1.980
CPMSO2	.	.	<2.240
CR	.	.	.
CU	.	.	.
DBCP	.	.	<0.293
DCPD	.	.	<9.310
DIMP	.	.	73.400
DITH	.	.	<3.340
DLDRN	.	.	<0.054
DMDS	.	.	<1.160
DMMP	.	.	<16.300
ENDRN	.	.	<0.060
ETC6H5	.	.	<0.620
FL	.	.	1100.000
HG	.	.	<0.500
ISODR	.	.	<0.056
K	.	.	4090.000
MEC6H5	.	.	<2.100
MG	.	.	.
MIBK	.	.	<12.900
MXYLEN	.	.	<1.040
NA	.	.	.
NIT	.	.	.
OXAT	.	.	<1.350
PB	.	.	.
PPDDE	.	.	<0.046
PPDDT	.	.	0.059
SO4	.	.	478000.000
T12DCE	.	.	<1.800
TCLEE	.	.	<2.800
TRCLE	.	.	<1.300
XYLEN	.	.	1.340
ZN	.	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

#	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
6	ALL	7.5-28.5	4.0	28.5	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87	2ND QUARTER FY88
111TCE	.	.	<1.090
112TCE	.	.	<1.630
11DCE	.	.	<1.850
11DCLE	.	.	<1.930
12DCLE	.	.	15.200
ALDRN	.	.	<1.900
AS	.	.	<3.680
BTZ	.	.	<1.100
C6H6	.	.	<1.920
CA	.	.	.
CCL4	.	.	<1.690
CD	.	.	.
CH2CL2	.	.	<2.480
CHCL3	.	.	<1.880
CL	.	.	3380000.000
CL6CP	.	.	<1.900
CLC6H5	.	.	3.370
CLDAN	.	.	<0.348
CPMS	.	.	<1.080
CPMSO	.	.	<1.980
CPMSO2	.	.	4.140
CR	.	.	.
CU	.	.	.
DBCP	.	.	<0.130
DCPD	.	.	77.100
DIMP	.	.	5390.000
DITH	.	.	6.330
DLDRN	.	.	<0.123
DMDS	.	.	<1.160
DMMP	.	.	<16.300
ENDRN	.	.	<0.137
ETC6H5	.	.	<0.620
FL	.	.	4420.000
HG	.	.	<0.500
ISODR	.	.	<0.128
K	.	.	.
MEC6H5	.	.	<2.100
MG	.	.	.
MIBK	.	.	<12.900
MXYLEN	.	.	<1.040
NA	.	.	.
NIT	.	.	.
OXAT	.	.	<2.250
PB	.	.	.
PPDDE	.	.	0.105
PPDDT	.	.	<0.135
SO4	.	.	1630000.000
T12DCE	.	.	<1.800
TCLEE	.	.	<9.400
TRCLE	.	.	<1.800
XYLEN	.	.	<1.340
ZN	.	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

#	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
	ALL	18.6-34.8	4.0	31.9	SS	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87	2ND QUARTER FY88
111TCE	.	.	<1.090
112TCE	.	.	<1.630
11DCE	.	.	<1.850
11DCLE	..	.	<1.930
12DCLE	.	.	<2.070
ALDRN	.	.	<0.083
AS	.	.	<2.500
BTZ	.	.	<1.100
C6H6	.	.	<1.920
CA	.	.	.
CCL4	.	.	<1.690
CD	.	.	.
CH2CL2	.	.	<2.480
CHCL3	.	.	<1.880
CL	.	.	256000.000
CL6CP	.	.	<0.083
CLC6H5	.	.	28.700
CLDAN	.	.	<0.152
CPMS	.	.	<1.080
CPMSO	.	.	<1.980
CPMSO2	.	.	<2.240
CR	.	.	.
CU	.	.	.
DBCP	.	.	<0.130
DCPD	.	.	<9.310
DIMP	.	.	<10.100
DITH	.	.	<3.340
DLDRN	.	.	<0.054
DMDS	.	.	<1.160
DMMP	.	.	<16.300
ENDRN	.	.	<0.060
ETC6H5	.	.	<0.620
FL	.	.	3300.000
HG	.	.	<0.500
ISODR	.	.	<0.056
K	.	.	3200.000
MEC6H5	.	.	<2.100
MG	.	.	.
MIBK	.	.	<12.900
MXYLEN	.	.	<1.040
NA	.	.	.
NIT	.	.	.
OXAT	.	.	1.350
PB	.	.	.
PPDDE	.	.	<0.046
PPDDT	.	.	<0.059
SO4	.	.	301000.000
T12DCE	.	.	<1.900
TCLEE	.	.	<2.300
TRCLE	.	.	<1.300
XYLEN	.	.	<1.340
ZN	.	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

LL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
LLER	ALL	0.0- 0.0	0.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	198000.000	194000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	18.400	13.800
CL	177000.000	170300.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	16.900
CPMSO2	10.100	4.700
CR	<5.260	<8.200
CU	<7.940	<7.940
DBCP	0.187	0.184
DCPD	<9.310	<9.310
DIMP	133.000	37.000
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
[illegible]	<1.800	[illegible]
DMMP	<15.200	[illegible]
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1280.000	1280.000
HG	[illegible]	[illegible]
ISODR	<0.060	<0.060
K	2150.000	2790.000
MEC6H5	[illegible]	[illegible]
MG	55500.000	52400.000
MIBK	[illegible]	[illegible]
MXYLEN	[illegible]	[illegible]
NA	281000.000	[illegible]
NIT	2780.000	[illegible]
[illegible]	[illegible]	[illegible]
PB	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

LL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
II	ALL	0.0- 0.0	0.0	58.0	SH	1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	167000.000	159000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	91700.000	93100.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CP	<5.960	25.000
[illegible]	<7.940	44.700
DBCP	<0.130	<0.130
DCPD	<9.310	9.310
DIMP	10.500	[illegible].500
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
[illegible]	1.[illegible]	<1.400
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	1.280	1.280
FL	<122[illegible]	<1220.000
HG	[illegible]	[illegible]
ISODR	[illegible]	0.160
K	2610.[illegible]	[illegible]
MEC6H5	[illegible]	1.2[illegible]
MG	1780[illegible]	18[illegible]
MIBK	<12.9[illegible]	12.900
MXYLEN	[illegible]	[illegible]
NA	[illegible]	[illegible]
NIT	344[illegible]	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

LL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
OM	ALL	0.0- 0.0	0.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	.	<1.000
112TCE	.	<1.000
11DCE	.	.
11DCLE	.	<2.000
12DCLE	.	<1.000
ALDRN	.	<4.700
AS	.	.
BTZ	.	.
C6H6	.	<1.100
CA	.	.
CCL4	.	<1.500
CD	.	.
CH2CL2	.	<4.800
CHCL3	.	<1.000
CL	.	.
CL6CP	.	<11.000
CLC6H5	.	<2.100
CLDAN	.	<5.100
CPMS	.	<14.000
CPMSO	.	<17.000
CPMSO2	.	<8.000
CR	.	.
CU	.	.
DBCP	.	<3.800
DCPD	.	<1.100
DIMP	.	73.300
DITH	.	<11.000
DLDRN	.	<4.700
DMDS	.	<2.500
DMMP	.	.
ENDRN	.	<7.600
ETC6H5	.	<1.000
FL	.	.
HG	.	.
ISODR	.	5.000
K	.	.
MEC6H5	.	[illegible]
MG	.	.
MIBK	.	<2.[illegible]
MXYLEN	.	1.[illegible]
NA	.	.
NIT	.	.
OXAT	.	[illegible]
PB	.	.
PPDDE	.	[illegible]
PPDDT	.	[illegible]
SO4	.	.
T12DCE	.	[illegible]
TCLEE	.	[illegible]
TRCLE	.	[illegible]
XYLEN	.	[illegible]
ZN	.	.

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

LL #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
I	ALL	0.0- 0.0	0.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	91600.000	101000.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	72800.000	85800.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	16.300
CU	18.900	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	<10.500
DITH	<1.100	1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	<1220.000	<1220.000
HG	<0.480	0.240
ISODR	<0.060	<0.060
K	1840.000	3600.000
MEC6H5	<1.210	1.210
MG	24100.000	26700.000
MIBK	<12.300	<12.300
MXYLEN	<1.350	<1.350
NA	[illegible]	[illegible]
NIT	3740.000	[illegible]
OXAT	[illegible]	[illegible]
PB	[illegible]	[illegible]
PPDDE	[illegible]	[illegible]
PPDDT	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
T12DCE	[illegible]	[illegible]
TCLEE	[illegible]	[illegible]
TRCLE	[illegible]	[illegible]
XYLEN	[illegible]	[illegible]
ZN	[illegible]	[illegible]

TASK 39 WATER CHEMISTRY SUMMARY
SOURCE, ESE 1988

[illegible]L #	AQUIFER	SCREENED INTERVAL	CASING DIAMETER	BEDROCK DEPTH	BEDROCK LITHOLOGY	WQAQ	DENVER SAND
[illegible]A	ALL	0.0- 0.0	0.0	0.0		1	

COMPOUND	3RD QUARTER FY87	4TH QUARTER FY87
111TCE	<1.700	<1.700
112TCE	<1.000	<1.000
11DCE	<1.100	<1.100
11DCLE	<1.200	<1.200
12DCLE	<0.610	<0.610
ALDRN	<0.070	<0.070
AS	<3.070	<3.070
BTZ	<2.000	<2.000
C6H6	<1.340	<1.340
CA	83800.000	77900.000
CCL4	<2.400	<2.400
CD	<5.160	<5.160
CH2CL2	<5.000	<5.000
CHCL3	<1.400	<1.400
CL	60300.000	67100.000
CL6CP	<0.070	<0.070
CLC6H5	<0.580	<0.580
CLDAN	.	.
CPMS	<1.300	<1.300
CPMSO	<4.200	<4.200
CPMSO2	<4.700	<4.700
CR	<5.960	11.500
CU	<7.940	<7.940
DBCP	<0.130	<0.130
DCPD	<9.310	<9.310
DIMP	<10.500	13.200
DITH	<1.100	<1.100
DLDRN	<0.060	<0.060
DMDS	<1.800	<1.800
DMMP	<15.200	<15.200
ENDRN	<0.052	<0.052
ETC6H5	<1.280	<1.280
FL	1320.000	1210.000
HG	<0.480	[illegible].240
ISODR	<0.060	<0.060
K	1690.000	2370.000
MEC6H5	<1.210	<1.210
MG	23000.000	22500.000
MIBK	<12.900	<12.900
MXYLEN	<1.350	<1.350
NA	91300.000	72500.[illegible]
NIT	3450.000	[illegible]
OXAT	<2.000	[illegible]2.[illegible]
PB	<18.600	[illegible]
PPDDE	<0.053	[illegible]0.053
PPDDT	[illegible]	[illegible]
SO4	[illegible]15000.000	136000.[illegible]
T12DCE	<1.200	[illegible]1.200
TCLEE	<1.300	[illegible]
TRCLE	<1.100	<1.100
XYLEN	[illegible]	[illegible]
ZN	[illegible]1.000	[illegible]

SURFACE WATER

FLD GRP.	#	SAMPLE ID	DATE	TIME	71999 / 0 / SAM TYPE	72005 / 0 / S TECH	99720 / 0 / INSTAL SAMPLE	99758 / 0 / DEPTH CM	99759 / 0 / SITE TYPE	1002 / A8 / ARSENIC / UG/L	82034 / AA8 / K / UG/L	1027 / B8 / CADMIUM / UG/L	1034 / B8 / CR / UG/L	1042 / B8 / COPPER / UG/L	1051 / B8 / LEAD / UG/L	1092 / B8 / ZINC / UG/L	82032 / B8 / CA / UG/L	82033 / B8 / MG / UG/L
OPQIN	72	01CBD	12/14/85	09:15	SW	G	RK	0.0	RVER									
OPSW	1	01CDD	04/07/86	09:30	SW	G	RK	0.0	RVER	<3.90	2890	<5.20	<6.00	<7.90	<18.5	44.3	82600	12000
OPSW2	1	01CDD	06/12/86	13:30	SW	G	RK	0.0	RVER	8.15	13000	<5.16	7.76	<7.94	<18.6	26.5	139000	18500
OPS3	1	01CDD	09/04/86	09:20	SW	G	RK	0.0	RVER	<4.00	5400	<5.20	<6.00	<7.90	<18.5	<20.1	81900	16003
T440S1	1	01CDD	12/16/86	12:50	SW	G	RK	0.0	RVER	33.4	7230	<5.16	<11.9	<7.94	<18.6	65.2	84400	14900
T440S2	1	01CDD	03/26/87	13:30	SW	G	RK	0.0	RVER	<2.50	10200	<5.16	10.1	10.2	<18.6	49.1	110000	22300
T440S3	1	01CDD	06/16/87	11:04	SW	G	RK	0.0	RVER	<3.07	5010	<5.16	<5.96	<7.94	<18.6	33.4	55300	12300
T440S4	1	01CDD	10/16/87	10:41	SW	G	RK	0.0	RVER	<3.07	9330	<5.16	16.3	<7.94	<18.6	39.0	89400	17700
OPSW	2	01DCC	04/07/86	08:30	SW	G	RK	0.0	DTCH	<3.90	3550	<5.20	<6.60	<7.90	<18.5	37.9	65500	11800
OPSW2	2	01DCC	06/12/86	13:00	SW	G	RK	0.0	DTCH	<3.90	12500	<5.16	<5.96	<7.94	<18.6	46.2	80300	11700
OPS3	2	01DCC	09/04/86	08:50	SW	G	RK	0.0	DTCH	<4.00	3670	<5.20	<6.00	<7.90	<18.5	23.0	55200	12400
T440S1	2	01DCC	12/16/86	12:20	SW	G	RK	0.0	DTCH	<3.90	4150	<5.16	<11.9	<7.94	<18.6	39.7	78000	14900
T440S2	2	01DCC	03/26/87	12:30	SW	G	RK	0.0	DTCH	2.98	5080	<5.16	<5.96	<7.94	<18.6	40.7	72500	15100
T440S3	2	01DCC	06/16/87	10:30	SW	G	RK	0.0	DTCH	<3.07	1870	<5.16	<5.96	<7.94	<18.6	39.5	27300	7220
T440S4	2	01DCC	10/16/87	09:45	SW	G	RK	0.0	DTCH	<3.07	4660	<5.16	16.3	<7.94	<18.6	68.3	82700	16600
OPSW	6	06CBB	04/07/86	14:30	SW	G	RK	0.0	DTCH	<3.90	7750	<5.20	<6.00	<7.90	<18.5	58.0	73400	19400
OPSW2	6	06CBB	06/16/86	14:00	SW	G	RK	0.0	DTCH	9.04	5560	<5.20	<6.00	<7.90	<18.5	114	63600	10200
OPS3	6	06CBB	09/04/85	11:50	SW	G	RK	0.0	DTCH	<4.00	3730	<5.20	<6.00	<7.90	<18.5	<20.1	46800	11600
T440S3	6	06CBB	06/16/87	13:17	SW	G	RK	0.0	DTCH	<3.07	2160	<5.16	<5.96	<7.94	<18.6	26.1	32300	7580
T440S4	6	06CBB	10/12/87	13:20	SW	G	RK	0.0	DTCH	<3.07	4660	<5.16	11.5	<7.94	<18.6	<20.1	95500	21200
OPQIN	44	07ABB	11/21/85	08:30	SW	G	RK	0.0	CREK									
OPSW	5	07ABB	04/02/86	16:45	SW	G	RK	0.0	CREK	<3.90	2820	18.5	16.0	22.0	<18.5	83.2	347000	118000
OPSW2	5	07ABB	06/12/86	15:30	SW	G	RK	0.0	CREK	14.4	4300	<5.20	14.1	<7.90	<			
OPS3	5	07ABB	09/04/86	13:11	SW	G	RK	0.0	STRM	<4.00	2640	<5.20	<6.00	<7.90	<			
T440S1	5	07ABB	12/16/86	14:01	SW	G	RK	0.0	STRM	<3.90	3710	<5.16	12.3	<7.94	<			
T440S2	5	07ABB	03/27/87	09:31	SW	G	RK	0.0	CREK	<2.50	5080	<5.16	16.2	<7.94	<			
T440S3	5	07ABB	06/16/87	00:00	SW	G	RK	0.0	CREK	<3.07	2550	<5.16	<5.96	<7.94	<			

RMA SURFACE WATER

STORET CODE:					82035	71900	99133	77985	81596	34386	39300	39320	39330	39380	39390	39430	39350	98551
METHOD CODE:					B8	L8	Q8	R8	R8	S8	S8	S8	S8	S8	S8	S8	MM8	T8
PARAMETER:					NA	MERCURY	DBCP	DCPD	MIBK	HCCPD	P,P'-DDT	P,P'-DDE	ALDRIN	DIELDRIN	ENDRIN	ISODRIN	CHLORDANE	DIMP
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME														
OFQIN	72	01CDD	12/14/85	09:15			<0.130	<9.31					<0.070	<0.060	<0.050	<0.060		13.0
OPSW	1	01CDD	04/07/86	09:30	82200	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW2	1	01CDD	06/12/86	13:30	121000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPS3	1	01CDD	09/04/86	09:20	81000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S1	1	01CDD	12/16/86	12:50	140000	<0.500	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S2	1	01CDD	03/26/87	13:30	159000	<0.359	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	1	01CDD	06/16/87	11:04	67100	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S4	1	01CDD	10/16/87	10:41	143000	<0.240		<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW	2	01DCC	04/07/86	08:30	66200	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW2	2	01DCC	06/12/86	13:00	71400	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPS3	2	01DCC	09/04/86	08:50	39100	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S1	2	01DCC	12/16/86	12:20	94700	<0.500	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S2	2	01DCC	03/26/87	12:30	67800	<0.359	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	2	01DCC	06/16/87	10:30	20900	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S4	2	01DCC	10/16/87	09:45	77100	<0.240		<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW	6	06CBB	04/07/86	14:30	81000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW2	6	06CBB	06/16/86	14:00	889	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPS3	6	06CBB	09/04/86	11:50	33900	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	6	06CBB	06/16/87	13:17	23900	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S4	6	06CBB	10/12/87	13:20	112000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		16.9
OFQIN	44	07ABB	11/21/85	08:30			<0.130	<9.31					<0.070	<0.060	<0.050	<0.060		<10.0
OPSW	5	07ABB	04/02/86	16:45	813000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW2	5	07ABB	06/12/86	15:30	52800	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5

RMA SURFACE WATER

STORET CODE:					98552	81512	81580	98560	98561	98562	98563	98564	34010	34030	34371	98553	98554	98555
METHOD CODE:					T8	U8	U8	U8	U8	U8	U8	U8	W8	W8	W8	W8	W8	X5
PARAMETER:					DMMP	BTZ	DMDS	CPMSO2	CPMSO	CPMS	1,4-DITH	1,4-OXAT	TOLUEN	BENZENE	ETHYLBENZ	M-XYL	O&P-XYL	CL
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME														
OPQIW	72	01CDD	12/14/85	09:15	<15.2			<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34		<1.35	<2.47	146000
OPSW	1	01CDD	04/07/86	09:30	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	55400
OPSW2	1	01CDD	06/12/86	13:30	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	62000
OPS3	1	01CDD	09/04/86	09:20	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	72900
T440S1	1	01CDD	12/16/86	12:50	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	105000
T440S2	1	01CDD	03/26/87	13:30	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	109000
T440S3	1	01CDD	06/16/87	11:04	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	14.6	<1.28	<1.35	<2.47	53000
T440S4	1	01CDD	10/16/87	10:41	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	91000
OPSW	2	01DCC	04/07/86	08:30	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	55200
OPSW2	2	01DCC	06/12/86	13:00	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	39700
OPS3	2	01DCC	09/04/86	08:50	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	50900
T440S1	2	01DCC	12/16/86	12:20	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	93300
T440S2	2	01DCC	03/26/87	12:30	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	61600
T440S3	2	01DCC	06/16/87	10:30	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	22600
T440S4	2	01DCC	10/16/87	09:45	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	56200
OPSW	6	06CBB	04/07/86	14:30	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	56300
OPSW2	6	06CBB	06/16/86	14:00	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	40300
OPS3	6	06CBB	09/04/86	11:50	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	50600
T440S3	6	06CBB	06/16/87	13:17	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	26300
T440S4	6	06CBB	10/12/87	13:20	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.50	<1.21	<1.34	<1.28	<1.35	<2.47	83500
OPQIW	44	07ABB	11/21/85	08:30	<15.2			NA	NA	NA	NA	NA	<1.21	<1.34		<1.35	<2.47	336000
OPSW	5	07ABB	04/02/86	16:45	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	322000
OPSW2	5	07ABB	06/12/86	15:30	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	24900

RMA SURFACE WATER

STORET CODE.					98556	98581	32102	32106	34301	34423	34475	34496	34501	34506	34511	34531	34546	39180
METHOD CODE					Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8
PARAMETER.					FL	SO4	CCL4	CHCL3	CLC6H5	METHYLCL	TCLEE	11DCLE	11DCE	111TCE	112TCE	12DCLE	T12DCE	TRCLE
UNITS.					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME														
OFQ1W	72	01CDD	12/14/85	09:15	1330		<2.40	<1.40	<0.580		<1.30						<1.20	<5.50
OPSW	1	01CDD	04/07/86	09:30	<1200	174000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	1	01CDD	06/12/86	13:30	<1200	248000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	1	01CDD	09/04/86	09:20	<1200	206000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	1	01CDD	12/16/86	12:50	<1200	278000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	1	01CDD	03/26/87	13:30	<1200	316000	<2.40	<1.40	<0.580	<5.00	7.34	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	1	01CDD	06/16/87	11:04	<1220	136000	<2.40	<1.40	<0.580	<5.00	2.77	<1.20	<1.10	<1.70	<1.00	<0.610	1.82	<1.10
T440S4	1	01CDD	10/16/87	10:41	<1220	226000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW	2	01DCC	04/07/86	08:30	<1200	101000	<2.40	1.20	<0.580	<5.00	3.80	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	2	01DCC	06/12/86	13:00	<1200	104000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	2	01DCC	09/04/86	08:50	<1200	88100	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	2	01DCC	12/16/86	12:20	<1200	181000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	2	01DCC	03/26/87	12:30	<1200	131000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	2	01DCC	06/16/87	10:30	<1220	39300	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S4	2	01DCC	10/16/87	09:45	<1220	156000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW	6	06CBB	04/07/86	14:30	<1200	126000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	6	06CBB	06/16/86	14:00	<1200	99600	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	6	06CBB	09/04/86	11:50	<1200	83600	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	6	06CBB	06/16/87	13:17	<1220	43700	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S4	6	06CBB	10/12/87	13:20	<1220	191000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OFQ1W	44	07ABB	11/21/85	08:30	2710		<2.40	<1.40	<0.580		<1.30						<1.23	<1.10
OPSW	5	07ABB	04/02/86	16:45	2700	2080000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	5	07ABB	06/12/86	15:30	<1200	142000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10

RMA SURFACE WATER

STORET CODE					71999	72005	99720	99758	99759	1002	82034	1027	1034	1042	1051	1092	82032	82033
METHOD CODE					0	0	0	0	0	A8	AA8	B8	B8	B8	B8	B8	B8	E8
PARAMETER					SAM TYPE	S TECH	INSTAL SAMPLE	DEPTH CM	SITE TYPE	ARSENIC	K	CADMIUM	CR	COPPER	LEAD	ZINC	CA	MG
UNITS:										UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP.	#	SAMPLE ID	DATE	TIME														
OPS3	5	07ABB	09/04/86	13:11	SW	G	RK	0.0	STRM	<4.00	2640	<5.20	<6.00	<7.90	<18.5	<20.1	51000	14100
T440S1	5	07ABB	12/16/86	14:01	SW	G	RK	0.0	STRM	<3.90	3710	<5.16	12.3	<7.94	<18.6	36.4	79800	15400
T440S2	5	07ABB	03/27/87	09:31	SW	G	RK	0.0	CREK	<2.50	5080	<5.16	16.2	<7.94	<18.6	173	246000	31600
T440S3	5	07ABB	06/16/87	00:00	SW	G	RK	0.0	CREK	<3.07	2550	<5.16	<5.96	<7.94	<18.6	<20.1	63700	14450
OFQ1W	43	07BAA	11/21/85	11:00	SW	G	RK	0.0	DTCH									
OPSW	4	07BAA	04/02/86	16:30	SW	G	RK	0.0	DTCH	NA	4020	<5.20	<6.00	<7.90	<18.5	45.8	90300	13900
OPSW2	4	07BAA	06/12/86	15:10	SW	G	RK	0.0	DTCH	4.35	3640	<5.20	<6.00	<7.90	<18.5	33.4	76900	12200
OPS3	4	07BAA	09/04/86	13:41	SW	G	RK	0.0	DTCH	<4.00	3700	<5.20	<6.00	<7.90	<18.5	25.8	51100	11300
T440S1	4	07BAA	12/16/86	14:11	SW	G	RK	0.0	DTCH	6.26	2960	<5.16	<11.9	<7.94	<18.6	<20.1	306000	92300
T440S2	4	07BAA	03/27/87	10:00	SW	G	RK	0.0	DTCH	<2.50	5080	<5.16	<5.96	<7.94	<18.6	22.7	69200	13900
T440S3	4	07BAA	06/16/87	14:21	SW	G	RK	0.0	DTCH	<3.07	1770	<5.16	<5.96	<7.94	<18.6	<20.1	27400	7190
T440S4	4	07BAA	10/12/87	12:38	SW	G	RK	0.0	DTCH	<3.07	4500	<5.16	16.3	<7.94	<18.6	67.2	105000	22200
T4-SW	9	08001	12/20/85	09:05	SW	G	RK	0.0	STRM									
OFQ1W	50	08ADD	11/22/85	09:00	SW	G	RK	0.0	CREK									
OFQ1W	66	08ADD	12/20/85	15:15	SW	G	RK	0.0	CREK									
OPSW	11	08ADD	04/02/86	10:45	SW	G	RK	0.0	CREK	6.55	4410	<5.20	<6.00	<7.90	<18.5	24.2	117000	26900
OPSW2	11	08ADD	06/12/86	09:00	SW	G	RK	0.0	CREK	<3.90	4230	<5.20	<6.00	<7.90	<18.5	<20.1	115000	20600
OPS3	11	08ADD	09/04/86	11:00	SW	G	RK	0.0	STRM	<4.00	5640	<5.20	<6.00	<7.90	<18.5	<20.1	99000	20000
T440S1	11	08ADD	12/16/86	10:50	SW	G	RK	0.0	STRM	<3.90	3710	<5.16	<11.9	<7.94	<18.6	25.2	86000	18500
T440S2	11	08ADD	03/26/87	11:00	SW	G	RK	0.0	CREK	<2.50	5480	13.7	<5.96	21.1	<18.6	<20.1	82100	19000
T440S3	11	08ADD	06/16/87	09:33	SW	G	RK	0.0	CREK	<3.07	2460	<5.16	<5.96	<7.94	<18.6	<20.1	24400	21600
T440S4	11	08ADD	10/16/87	12:37	SW	G	RK	0.0	CREK	<3.07	5240	<5.16	12.5	<7.94	21.9	<20.1	95100	20400
OFQ1W	42	12AAB	11/19/85	14:15	SW	G	RK	0.0	RVER									
OPSW2	3	12AAB	06/16/86	12:45	SW	G	RK	0.0	RVER	<3.90	11300	<51.6	<59.6	<79.4	<186	<201	60200	10200
OPS3	3	12AAB	09/05/86	12:51	SW	G	RK	0.0	RVER	4.72	7930	<5.20	<6.00	<7.90	<18.5	<20.1	101000	17100
T440S1	3	12AAB	12/17/86	11:15	SW	G	RK	0.0	RVER	<3.90	7670	<5.16	<11.9	<7.94	<18.6	47.0	64500	13300
T440S2	3	12AAB	03/27/87	10:31	SW	G	RK	0.0	RVER	<2.50	10600	<5.16	6.21	10.7	<18.6	79.6	76200	15300
T440S3	3	12AAB	06/17/87	11:34	SW	G	RK	0.0	RVER	<3.07	3930	<5.16	<5.96	<7.94	<18.6	56.2	40200	8160
T440S4	3	12AAB	09/24/87	11:23	SW	G	RK	0.0	RVER	<3.07	8820	<5.16	14.4	<7.94	<18.6	26.0	96500	17400
OPSW	3	12ABB	04/07/86	12:45	SW	G	RK	0.0	RVER	<3.90	4530	28.6	31.3	32.1	28.6	81.1	70400	12800
OFQ1W	49	13DCC	11/22/85	09:45	SW	G	RK	0.0	CREK									
OFQ1W	77	13DCC	12/20/85	11:00	SW	G	RK	0.0	CREK									
OPSW	10	13DCC	04/02/86	12:30	SW	G	RK	0.0	CREK	<3.90	4530	<5.20	<6.00	<7.90	<18.5	29.5	112000	44600
T440S2	10	13DCC	03/26/87	14:14	SW	G	RK	0.0	CREK		6670	<5.16	<5.96	<7.94	<18.6	<20.1	10300	3300
T440S3	10	13DCC	06/17/87	12:52	SW	G	RK	0.0	CREK	3.50	5500	<5.16	<5.96	<7.94	<18.6	41.4	113000	36100

RMA SURFACE WATER

STORET CODE:					82035	71900	99133	77985	81596	34386	39300	39320	39330	39380	39390	39430	39350	98551
METHOD CODE:					B8	L8	Q8	R8	R8	S8	S8	S8	S8	S8	S8	S8	MM8	T5
PARAMETER:					NA	MERCURY	DBCP	DCPD	MIBK	HCCPD	P,P'-DDT	P,P'-DDE	ALDRIN	DIELDRIN	ENDRIN	ISODRIN	CHLORDANE	DIMP
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME														
OPS3	5	07ABB	09/04/86	13:11	47900	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S1	5	07ABB	12/16/86	14:01	99100	<0.500	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S2	5	07ABB	03/27/87	09:31	544000	<0.359	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	5	07ABB	06/16/87	00:00	71000	1.17	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OFQIW	43	07BAA	11/21/85	11:00			<0.130	<9.31					<0.070	<0.060	<0.050	<0.060		22.0
OPSW	4	07BAA	04/02/86	16:30	93900	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW2	4	07BAA	06/12/86	15:10	52600	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPS3	4	07BAA	09/04/86	13:41	36600	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S1	4	07BAA	12/16/86	14:11	615000	<0.500	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S2	4	07BAA	03/27/87	10:00	66200	<0.359	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	4	07BAA	06/16/87	14:21	22600	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S4	4	07BAA	10/12/87	12:38	96500	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T4-SW	9	08001	12/20/85	09:05			<0.130	<9.31	<13.0	NA	<0.050	<0.050	0.200	<0.060	<0.050	<0.060		<10.0
OFQIW	50	08ADD	11/22/85	09:00			<0.130	<9.31					<0.070	0.060	<0.050	<0.060		<10.0
OFQIW	66	08ADD	12/20/85	15:15			<0.130	<9.31					<0.070	<0.060	<0.050	<0.060		11.0
OPSW	11	08ADD	04/02/86	10:45	92600	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW2	11	08ADD	06/12/86	09:00	61200	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPS3	11	08ADD	09/04/86	11:00	60100	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S1	11	08ADD	12/16/86	10:50	60500	<0.500	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S2	11	08ADD	03/26/87	11:00	59800	<0.359	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	11	08ADD	06/16/87	09:33	66700	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S4	11	08ADD	10/16/87	12:37	62400	<0.240		<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OFQIW	42	12AAB	11/19/85	14:15			<0.130	<9.31					0.100	<0.060	<0.050	<0.060		<10.0
OPSW2	3	12AAB	06/16/86	12:45	68800	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPS3	3	12AAB	09/05/86	12:51	113000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S1	3	12AAB	12/17/86	11:15	118000	<0.500	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S2	3	12AAB	03/27/87	10:31	120000	<0.359	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	3	12AAB	06/17/87	11:34	40900	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S4	3	12AAB	09/24/87	11:23	134000	<0.480	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OPSW	3	12ABB	04/07/86	12:45	77200	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
OFQIW	49	13DCC	11/22/85	09:45			<0.130	<9.31					<0.070	0.080	<0.050	<0.060		<10.0
OFQIW	77	13DCC	12/20/85	11:00			<0.130	<9.31					0.200	<0.060	<0.050	<0.060		17.0
OPSW	10	13DCC	04/02/86	12:30	174000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S2	10	13DCC	03/26/87	14:14	12200	<0.359	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T440S3	10	13DCC	06/17/87	12:52	129000	<0.240	<0.130	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5

STORET CODE:					98552	81512	81580	98560	98561	98562	98563	98564	34010	34030	34371	98553	98554	98555
METHOD CODE:					T8	U8	U8	U8	U6	U8	U8	U8	W8	W8	W8	W8	W8	X8
PARAMETER:					DMMP	BTZ	DMDS	CPMSO2	CPMSO	CPMS	1,4-DITH	1,4-OXAT	TOLUEN	BENZENE	ETHYLBENZ	M-XYL	O&P-XYL	CL
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP.	#	SAMPLE ID	DATE	TIME														
OPS3	5	07ABB	09/04/86	13:11	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	56700
T440S1	5	07ABB	12/16/86	14:01	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	90000
T440S2	5	07ABB	03/27/87	09:31	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	231000
T440S3	5	07ABB	06/16/87	00:00	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	41600
OFQIW	43	07BAA	11/21/85	11:00	<15.2			NA	NA	NA	NA	NA	<1.21	<1.34		<1.35	<2.47	150000
OPSW	4	07BAA	04/02/86	16:30	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	76200
OPSW2	4	07BAA	06/12/86	15:10	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	37900
OPS3	4	07BAA	09/04/86	13:41	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	56900
T440S1	4	07BAA	12/16/86	14:11	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	250000
T440S2	4	07BAA	03/27/87	10:00	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	57100
T440S3	4	07BAA	06/16/87	14:21	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	23900
T440S4	4	07BAA	10/12/87	12:38	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	65400
T4-SW	9	08001	12/20/85	09:05	<15.2			<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.00	<1.35	<2.47	52500
OFQIW	50	08ADD	11/22/85	09:00	<15.2			NA	NA	NA	NA	NA	NA	NA		NA	NA	53700
OFQIW	66	08ADD	12/20/85	15:15	<15.2			<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34		<1.35	<2.47	56900
OPSW	11	08ADD	04/02/86	10:45	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	63300
OPSW2	11	08ADD	06/12/86	09:00	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	44900
OPS3	11	08ADD	09/04/86	11:00	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	59200
T440S1	11	08ADD	12/16/86	10:50	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	46700
T440S2	11	08ADD	03/26/87	11:00	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	48600
T440S3	11	08ADD	06/16/87	09:33	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	50500
T440S4	11	08ADD	10/16/87	12:37	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	46300
OFQIW	42	12AAB	11/19/85	14:15	<15.2			<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34		<1.35	<2.47	82400
OPSW2	3	12AAB	06/16/86	12:45	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	31100
OPS3	3	12AAB	09/05/86	12:51	<15.2		<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	88700
T440S1	3	12AAB	12/17/86	11:15	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	112000
T440S2	3	12AAB	03/27/87	10:31	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	103000
T440S3	3	12AAB	06/17/87	11:34	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	36200
T440S4	3	12AAB	09/24/87	11:23	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	133000
OPSW	3	12ABB	04/07/86	12:45	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	53900
OFQIW	49	13DCC	11/22/85	09:45	<15.2			NA	NA	NA	NA	NA	NA	NA		NA	NA	84200
OFQIW	77	13DCC	12/20/85	11:00	<15.2			<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34		<1.35	<2.47	83700
OPSW	10	13DCC	04/02/86	12:30	<15.2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	111000
T440S2	10	13DCC	03/26/87	14:14	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	96800
T440S3	10	13DCC	06/17/87	12:52	<15.2	<2.00	<1.80	<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	73100

STORET CODE:					98556	98581	32102	32106	34301	34423	34475	34496	34501	34506	34511	34531	34546	39180
METHOD CODE:					X8	X8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8
PARAMETER:					FL	SO4	CCL4	CHCL3	CLC6H5	METHYLCL	TCLEE	11DCLE	11DCE	111TCE	112TCE	12DCLE	T12DCE	TECLE
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP.	#	SAMPLE ID	DATE	TIME														
OPS3	5	07ABB	09/04/86	13:11	<1200	129000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	5	07ABB	12/16/86	14:01	<1200	173000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	5	07ABB	03/27/87	09:31	1590	1530000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	5	07ABB	06/16/87	00:00	<1220	197000	<2.40	<1.40	<0.550	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OFQIW	43	07BAA	11/21/85	11:00	1550		<2.40	<1.40	<0.580		<1.30						<1.20	<1.10
OFSW	4	07BAA	04/02/86	16:30	<1200	151000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	4	07BAA	06/12/86	15:10	<1200	163000	<2.40	7.96	<0.550	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	4	07BAA	09/04/86	13:41	<1200	83600	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	4	07BAA	12/16/86	14:11	1730	1730000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	4	07BAA	03/27/87	10:00	<1200	133000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	4	07BAA	06/16/87	14:21	<1220	43000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	1.17	<1.20	<1.10
T440S4	4	07BAA	10/12/87	12:38	<1220	178000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T4-SW	9	08001	12/23/85	09:05	<1200		<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OFQIW	50	08ADD	11/22/85	09:00	<1200		NA	NA	NA		NA						NA	NA
OFQIW	66	08ADD	12/20/85	15:15	<1200		<2.40	<1.40	<0.580		<1.30						<1.20	<1.10
OPSW	11	08ADD	04/02/86	10:45	<1200	141000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	11	08ADD	06/12/86	09:00	<1200	123000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	11	08ADD	09/04/86	11:00	<1200	127000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	11	08ADD	12/16/86	10:50	<1200	133000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	11	08ADD	03/26/87	11:00	<1200	11800	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	11	08ADD	06/16/87	09:33	<1220	122000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S4	11	08ADD	10/16/87	12:37	<1220	124000	<2.40	<1.40	<0.550	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T4-SW	11	11001	12/20/85	13:45	<1200		<2.40	<1.40	<0.590	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OFQIW	42	12AAB	11/19/85	14:15	<1200		<2.40	<1.40	<0.580		<1.30						<1.20	<5.50
OPCW2	3	12AAB	06/16/86	12:45	<1200	85700	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	3	12AAB	09/05/86	12:51	<1200	163000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	3	12AAB	12/17/86	11:15	<1200	193000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	3	12AAB	03/27/87	10:31	<1200	193500	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	3	12AAB	06/17/87	11:34	<1220	84700	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S4	3	12AAB	09/24/87	11:23	<1220	199000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW	3	12ABB	04/07/86	12:45	<1200	121000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OFQIW	49	13DCC	11/22/85	09:45	<1200		NA	NA	NA		NA						NA	NA
OFQIW	77	13DCC	12/20/85	11:00	<1200		<2.40	<1.40	<0.580		<1.30						<1.20	<1.10
OPSW	10	13DCC	04/02/86	12:30	<1200	261000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	10	13DCC	03/26/87	14:14	<1200	268000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	10	13DCC	06/17/87	12:52	<1220	254000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10

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RMA SURFACE WATER

STORET CODE				71999	72005	99700	99755	99759	1002	82034	1027	1034	1042	1051	1092	82032	82033
METHOD CODE				0	0	0	0	0	AS	AA3	BB	BB	BB	BB	BB	BB	BB
PARAMETER				SAM TYPE	S TECH	INSTAL SAMPLE	DEPTH CM	SITE TYPE	ARSENIC	K	CADMIUM	CR	COPPER	LEAD	ZINC	CA	MG
UNITS									UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP	#	SAMPLE ID	DATE TIME														
CPQW	43	14SCD	12/14/85 10:00	SW	G	NI	0.0	CREE									
CFSW	3	14SCD	04/22/86 14:00	SW	G	NI	0.0	CREE	<3.90	4600	<5.20	<6.00	<7.90	<18.5	29.5	118000	45700
CFSW2	9	14SCD	06/16/85 14:40	SW	G	NI	0.0	CREE	9.64	3710	<5.20	<6.00	<7.90	<18.5	<20.1	135000	55600
T44CS1	9	14SCD	12/16/86 13:21	SW	G	NI	0.0	CREE	<3.90	2960	<5.16	<11.9	<7.94	<18.6	23.2	106000	47400
T44CS2	9	14SCD	03/26/87 15:20	SW	G	NI	4.0	CREE	2.78	7070	<5.16	<5.96	<7.94	<18.6	<20.1	100000	39800
T44CS3	9	14SCD	06/17/87 15:30	SW	G	NI	0.0	CREE	4.10	6090	<5.16	<5.96	<7.94	<18.6	<20.1	85300	38400
T44CS4	9	14SCD	10/12/87 16:49	SW	G	NI	0.0	CREE	<3.07	2610	<5.16	11.5	<7.94	<18.6	<20.1	90800	43900
CFSW	7	22CAA	04/15/86 12:45	SW	G	NI	353	LAKE	<3.90	4140	<5.20	<6.00	<7.90	<18.5	23.2	75900	15000
CFSW2	7	22CAA	06/16/86 10:00	SW	G	NI	0.0	LAKE	<3.90	5710	<5.20	<6.00	<7.90	<18.5	<20.1	87400	13900
CFS3	7	22CAA	09/25/85 11:00	SW	G	NI	0.0	LAKE	<3.90	4860	<5.20	<6.00	<7.90	31.2	<20.1	85900	13100
T44CS2	7	22CAA	04/28/87 11:00	SW	G	NI	0.0	LAKE	2.56	5450	<5.16	<5.96	12.1	<18.6	<20.1	54700	14300
T44CS3	7	22CAA	06/17/87 09:26	SW	G	NI	0.0	LAKE	<3.07	4320	<5.16	<5.96	<7.94	<18.6	<20.1	57100	11500
T44CS4	7	22CAA	10/20/87 09:41	SW	G	NI	0.0	LAKE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CPQW	47	33ASB	12/12/85 10:00	SW	G	NI	0.0	LAKE									
CFSW	8	33ASB	04/15/86 09:30	SW	G	NI	0.0	LAKE	<3.90	2400	<5.20	<6.00	<7.90	<18.5	<20.1	64500	13500
CFSW2	8	33ASB	06/16/86 11:00	SW	G	NI	0.0	LAKE	<3.90	2300	<5.20	<6.00	<7.90	<18.5	36.2	69000	11900
CFS3	8	33ASB	09/25/86 11:40	SW	G	NI	0.0	LAKE	<3.90	4400	<5.20	<6.00	<7.90	<18.5	<20.1	131000	13900
T44CS1	8	33ASB	12/17/86 09:40	SW	G	NI	0.0	LAKE	<3.90	4030	<5.16	<11.9	<7.94	<18.6	29.3	82300	14700
T44CS2	8	33ASB	04/28/87 11:11	SW	G	NI	0.0	LAKE	<2.50	4240	<5.16	<5.96	<7.94	<18.6	39.8	61000	13100
T44CS3	8	33ASB	06/17/87 10:48	SW	G	NI	0.0	LAKE	<3.07	2180	<5.16	<5.96	<7.94	<18.6	29.1	31300	7290
T44CS4	8	33ASB	10/20/87 10:55	SW	G	NI	0.0	LAKE	<3.07	4010	<5.16	7.63	<7.94	<18.6	<20.1	75900	16100

RMA SURFACE WATER

STORET CODE				82035	71900	99133	77335	81596	34386	39300	39320	39330	39380	39390	39430	39350	98551
METHOD CODE				BB	LB	Q8	98	BB	SS	S8	S8	S8	S8	S8	S8	HH3	T8
PARAMETER				NA	MERCURY	DBCP	DCPD	MIBK	HCCPD	P,P'-DDT	P,P'-DDE	ALDRIN	DIELDRIN	ENDRIN	ISODRIN	CHLORDANE	DIMP
UNITS				UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP	#	SAMPLE ID	DATE TIME														
CFGW	48	14500	12/14/85 [illegible]			<0.133	<9.31					<0.070	<0.060	<0.050	<0.060		58.0
CFSW	9	14500	[illegible]	[illegible]	<0.240	<0.133	<9.31	<12.9	<0.070	<0.053	<0.053	<0.070	0.052	<0.052	<0.060		69.9
CFSW1	9	14500	[illegible]	302000	<0.240	<0.133	24.2	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		466
T44031	9	14500	[illegible]	281000	<0.500	<0.133	31.5	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		550
T44032	9	14500	[illegible]	157000	0.359	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		89.3
T44033	9	14500	[illegible]	159000	<0.240	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		74.6
T44034	9	14500	[illegible]	233000	<0.240	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	0.060	<0.052	<0.060		196
CFSW	7	22244	[illegible]	73700	<0.240	<0.133	NA	NA	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
CFSW1	7	22244	[illegible]	83000	IL	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
CFS3	7	22244	[illegible]	65700	<0.240	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T44032	7	22244	[illegible]	86000	<0.359	<0.133	<9.31	<12.9	NA	NA	NA	NA	NA	NA	NA		11.7
T44033	7	22244	[illegible]	88000	<0.240	<0.133	<9.31	<12.9	<0.070	0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T44034	7	22244	[illegible]	NA	NA	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
CFGW	47	33888	[illegible]			<0.133	<9.31					0.100	<0.060	0.400	<0.060		<10.5
CFSW	8	33888	[illegible]	58800	<0.240	<0.133	NA	NA	<0.070	<0.053	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
CFSW1	8	33888	[illegible]	45100	<0.240	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
CFS3	8	33888	[illegible]	122000	<0.240	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T44031	8	33888	[illegible]	131000	<0.500	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T44032	8	33888	[illegible]	60800	<0.359	<0.133	<9.31	<12.9	NA	NA	NA	NA	NA	NA	NA		<10.5
T44033	8	33888	[illegible]	25000	<0.240	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5
T44034	8	33888	[illegible]	65500	<0.240	<0.133	<9.31	<12.9	<0.070	<0.070	<0.053	<0.070	<0.060	<0.052	<0.060		<10.5

RMA SURFACE WATER

STORET CODE					98552	81512	81550	98560	98561	98562	98563	98564	34010	34030	34371	98553	98554	98555
METHOD CODE					T8	U8	U8	U8	U3	U8	U8	U8	W8	W8	W8	W8	W8	X8
PARAMETER					CMMP	BTZ	DMDS	CPMSO2	CPMSO	CPMS	1,4-DITH	1,4-OXAT	TOLUEN	BENZENE	ETHYLBENZ	M-XYL	O&P-XYL	CL
UNITS					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP	#	SAMPLE ID	DATE	TIME														
CPQIW	43	14BDD	12/14/85	10 00	<15 2			<4.70	<4.20	<1.30	<1.10	<2.00	<1.21	<1.34		<1 35	<2.47	142000
CPSW	9	14BDD	04/02/86	14 00	<15 2			<4.70	<4.20	<11.7	<11.3	<20.0	<1.21	<1.34	<1.28	<1.35	<2.47	157000
CPSW2	9	14BDD	06/16/86	14.40	<15 2		<1.80	<4.70	<4.20	<1.30	2.21	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	295000
T44CS1	9	14BDD	12/16/86	13 21	<15.2	<2.00	<1 80	5.20	<4.20	<1.30	2.76	<2.00	<1.21	<1.34	<1.28	<1.35	<2.47	286000
T44CS2	9	14BDD	03/26/87	15 20	<15.2	<2 00	<1 80	<4 70	<4 20	<1.30	<1.10	<2.00	<1.21	<1.34	<1.28	<1 35	<2 47	147000
T44CS3	9	14BDD	06/17/87	13 20	<15 2	<2 00	<1 80	<4 70	<4.20	<1 30	<1.10	<2.00	<1.21	<1 34	<1 28	<1.35	<2 47	131000
T44CS4	9	14BDD	10/12/87	15 49	<15 2	<2 00	<1.80	<4 70	<4.20	<1.30	<1 10	<2 00	<1.21	<1.34	<1.28	<1 35	<2.47	185000
CPSW	7	22CAA	04/15/86	13 45	<15 2			<4 70	<4 20	<1.30	<1 10	<2 00	<1 21	<1.34	<1.28	<1 35	<2 47	50500
CPSW2	7	22CAA	06/16/86	10 00	<15 2		<1 80	<4 70	<4 20	<1.30	<1 10	<2 00	<1.21	<1.34	<1 28	<1.35	<2 47	61100
CPS3	7	22CAA	09/05/86	11 00	<15 2		<1.80	<4.70	<4.20	<1.30	<1 10	<2 00	<1.21	<1.34	<1.28	<1.35	<2 47	51500
T44CS2	7	22CAA	04/08/87	11 11	<15 2	NA	NA	NA	NA	NA	NA	NA	<1.21	<1.34	<1.28	<1.35	<2.47	70500
T44CS3	7	22CAA	06/17/87	09 26	<15 2	<2 00	<1 80	<4 70	<4 20	<1.30	<1 10	<2 00	<1 21	<1.34	<1 28	<1 35	<2.47	59900
T44CS4	7	22CAA	10/23/87	09 41	<15 2	<2 00	<1.80	<4 70	<4 20	<1.30	<1.10	<2.00	<1 21	<1.34	<1.28	<1 35	<2.47	51400
CPQIW	47	33BBB	12/12/85	10 00	<15 2			<4 70	<4 20	<1.30	<1.10	<2 00	<1.21	<1.34		<1.35	<2.47	54900
CPSW	8	33BBB	04/15/86	08 30	<15 2			<4.70	<4 20	<1 30	<1.10	<2 00	<1 21	<1 34	<1 28	<1.35	<2 47	51300
CPSW2	8	33BBB	06/16/86	12 00	<15 2		<1 80	<4.70	<4 20	<1 30	<1.10	<2 00	<1 21	<1.34	<1 28	<1 35	<2.47	38800
CPS3	8	33BBB	09/05/86	11 40	<15 2		<1.80	<4.70	<4 20	<1.30	<1.10	<2 00	<1.21	<1.34	<1.28	<1 35	<2.47	55300
T44CS1	8	33BBB	12/17/86	09 40	<15 2	<2 00	<1.80	<4 70	<4 20	<1 30	<1.10	<2.00	<1.21	<1.34	<1.28	<1 35	<2 47	37800
T44CS2	8	33BBB	04/08/87	12 11	<15 2	NA	NA	NA	NA	NA	NA	NA	<1.21	<1.34	<1 28	<1 35	<2 47	55700
T44CS3	8	33BBB	06/17/87	10 48	<15 2	<2 00	<1 80	<4.70	<4 20	<1 30	<1.10	<2 00	<1.21	<1.34	<1.28	<1.35	<2.47	24200
T44CS4	8	33BBB	10/23/87	10 55	<15 2	<2 00	<1 80	<4 70	<4 20	<1 30	<1.10	<2.00	<1.21	<1.34	<1.28	<1 35	<2.47	53400

RMA SURFACE WATER

STORET CODE					98556	98581	32102	32106	34301	34423	34475	34496	34501	34506	34511	34531	34546	39180
METHOD CODE					X8	X8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8
PARAMETER.					FL	SO4	CCL4	CHCL3	CLC6H5	METHYLCL	TCLEE	11DCLE	11DCE	111TCE	112TCE	12DCLE	T12DCE	TRCLE
UNITS					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP	#	SAMPLE ID	DATE	TIME														
OPQIW	43	14BDD	12/14/85	10.00	1470		<2.40	<1.40	<0.580		<1.30						<1.20	<1.10
OPSW	9	14BDD	04/02/86	14.00	1460	300000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	9	14BDD	06/16/86	14.40	1790	416000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	9	14BDD	12/16/86	13.21	1560	396000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	0.754	<1.20	<1.10
T440S2	9	14BDD	03/26/87	15.20	1280	328000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	9	14BDD	06/17/87	13.20	1290	288000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S4	9	14BDD	10/12/87	16.49	1910	369000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW	7	22CAA	04/15/86	10.45	<1200	104000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	7	22CAA	06/16/86	10.00	<1200	118000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	7	22CAA	09/05/86	11.00	<1200	102000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	7	22CAA	04/03/87	11.11	<1220	136000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	7	22CAA	06/17/87	09:26	<1220	98600	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S4	7	22CAA	10/23/87	09:41	<1220	127000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPQIW	47	33ABB	12/12/85	10.00	<1200		<2.40	3.08	<0.580		<1.30						<1.20	<1.10
OPSW	8	33ABB	04/15/86	08:30	<1200	94200	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPSW2	8	33ABB	06/16/86	12.00	<1200	96500	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
OPS3	8	33ABB	09/05/86	11:40	<1200	99300	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S1	8	33ABB	12/17/86	09:40	<1200	176000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S2	8	33ABB	04/03/87	12.11	<1220	112000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S3	8	33ABB	06/17/87	10.48	<1220	41800	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10
T440S4	8	33ABB	10/23/87	10.55	<1220	138000	<2.40	<1.40	<0.580	<5.00	<1.30	<1.20	<1.10	<1.70	<1.00	<0.610	<1.20	<1.10

F.3 GC/MS ANALYTICAL RESULTS

GC/MS TRIP BLANK DATA

METHOD CODE:					34475	39180	98333	98334	99133	77985	98633
					M8	M8	M8	M8	M8	M8	M8
PARAMETER:					TCLEE	TRCLE	M-XYLENE	OP-XYL	DBCP	DCPD	BCHD
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP.	#	SAMPLE ID	DATE	TIME							
T4TBKC	2	TBK2	06/04/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	3	TBK3	06/05/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	5	TBK5	06/12/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	6	TBK6	06/23/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	7	TBK7	06/24/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	8	TBK8	06/24/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	9	TBK9	06/26/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	10	TBK10	06/27/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	11	TBK11	06/30/86	08:52	[illegible]	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBKC	12	TBK12	07/01/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	3	TB3	08/28/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	4	TB4	09/02/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	5	TB5	09/03/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	6	TB6	09/04/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	7	TB7	09/05/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	8	TB8	09/08/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
UPTBC	4	TB4	09/12/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	9	TB9	09/15/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	10	TB10	09/17/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	11	TB11	09/18/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	12	TB12	09/19/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	13	TB13	09/22/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	14	TB14	09/23/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	15	TB15	09/24/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	16	TB16	09/26/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T4TBC	17	TB17	09/29/86	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T44CMS3	50	TB1	05/05/87	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T44CMS3	51	TB2	05/06/87	00:00	<1.0	<1.0	<1.0	<2.0	<4.0	<2.0	<1.0
T44CMS3	52	TB3	05/08/87	00:00	<1.0	<1.0	<1.0	<2.0	<3.8	<1.1	<1.0
T44CMS3	53	TB4	05/11/87	00:00	<1.0	<1.0	<1.0	<2.0	<3.8	<1.1	<1.0
T44CMS3	54	TB5	05/12/87	00:00	<1.0	<1.0	<1.0	<2.0	<3.8	<1.1	<1.0
T44CMS3	55	TB6	05/13/87	07:52	<1.0	<1.0	<1.0	<2.0	<3.8	<1.1	<1.0
T44CMS3	56	TB7	05/16/87	00:00	<1.0	<1.0	<1.0	<2.0	<3.8	<1.1	<1.0
T44CMS3	57	TB8	05/19/87	00:00	<1.0	<1.0	<1.0	<2.0	<3.8	<1.1	<1.0
T44CMS3	59	TB10	07/09/87	07:20	<1.0	<1.0	1.4	<2.0	<3.8	<1.1	<1.0

STORET CODE:					34371	34030	81596	81560	34496	34531	34506	34511	34423	32106	32102	34546	34010	34301
METHOD CODE:					MB	MB	MB	MB	MB	MB	MB	MB	MB	MB	MB	MB	MB	MB
PARAMETER					ETHYBENZ	BENZENE	MIBK	DMDS	11DCLE	12DCLE	111TCE	112TCE	METHYLCL	CHCL3	CCL4	T12DCE	TOLUEN	CLC6H5
UNITS					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP	#	SAMPLE ID	DATE	TIME														
T4TBKC	2	TBK2	06/04/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	3	TBK3	06/05/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	5	TBK5	06/12/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	6	TBK6	06/23/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	3.9	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	7	TBK7	06/24/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	8	TBK8	06/24/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	9	TBK9	06/26/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	10	TBK10	06/27/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	11	TBK11	06/30/86	08:52	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBKC	12	TBK12	07/01/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	3	TB3	08/28/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	6.66	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	4	TB4	09/02/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	5.88	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	5	TB5	09/03/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	6.79	14.3	<2.0	<2.0	1.3	<2.0
T4TBC	6	TB6	09/04/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	6.41	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	7	TB7	09/05/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	1.9	<2.0
T4TBC	8	TB8	09/08/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
UPTBC	4	TB4	09/12/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TB	9	TB9	09/15/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TB	10	TB10	09/17/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	11	TB11	09/18/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	12	TB12	09/19/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	8.45	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	13	TB13	09/22/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	1.1	<2.0
T4TBC	14	TB14	09/23/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	15	TB15	09/24/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	16	TB16	09/26/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T4TBC	17	TB17	09/29/86	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T44CMS3	50	TB1	05/05/87	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.0	<2.0	<1.0	<2.0
T44CMS3	51	TB2	05/06/87	00:00	<1.0	<1.0	<2.0	<3.0	<2.0	<1.0	<1.0	<1.0	<5.00	<1.00	<2.6	<2.0	<1.0	<2.0
T44CMS3	52	TB3	05/08/87	00:00	<1.0	<1.1	<2.0	<2.5	<2.0	<1.0	<1.0	<1.0	15.9	<1.00	<1.5	<1.2	<1.0	<2.1
T44CMS3	53	TB4	05/11/87	00:00	<1.0	<1.1	<2.0	<2.5	<2.0	<1.0	<1.0	<1.0	<4.80	<1.00	<1.5	<1.2	<1.0	<2.1
T44CMS3	54	TB5	05/12/87	00:00	<1.0	<1.1	<2.0	<2.5	<2.0	<1.0	<1.0	<1.0	<4.80	<1.00	<1.5	<1.2	<1.0	<2.1
T44CMS3	55	TB6	05/13/87	07:52	<1.0	<1.1	<2.0	<2.5	<2.0	<1.0	<1.0	<1.0	<4.80	<1.00	<1.5	<1.2	<1.0	<2.1
T44CMS3	56	TB7	05/18/87	00:00	<1.0	<1.1	<2.0	<2.5	<2.0	<1.0	<1.0	<1.0	<4.80	<1.00	<1.5	<1.2	<1.0	<2.1
T44CMS3	57	TB8	05/19/87	00:00	<1.0	<1.1	<2.0	<2.5	<2.0	<1.0	<1.0	<1.0	9.81	<1.00	<1.5	<1.2	<1.0	<2.1
T44CMS3	59	TB10	07/09/87	07:20	<1.0	<1.1	<2.0	<2.5	<2.0	<1.0	<1.0	<1.0	5.72	<1.00	<1.5	<1.2	<1.0	<2.1

3RD QUARTER FY 1986 TASK 4 GC/MS CONFIRMATION DATA

FIELD GROUP NUMBERS TC44. T4BWC. AND OPW2C ARE GC/MS RESULTS

[illegible] CODE:					[illegible]	34380	39330	39430	39320	39380	39390	39300	61580	98564	98563	98562	81512	98561
METHOD CODE:					BBB	S8	S8	S8	S8	S8	S8	S8	U8	U8	U8	U8	U8	U8
PARAMETER:					DIMP	HCCPD	ALDRIN	ISODRIN	P,P'-DDE	DIELDRIN	ENDRIN	P,P'-DDT	DMDS	1,4-OXAT	1,4-DITH	CPMS	BTZ	CPMSO
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD GRP	#	SAMPLE ID	DATE	TIME														
T4CC	3	01020	06 25 86	10:30	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	25.4	<14.0		<17.0
T4CW	5	01020	06 25 86	10:30	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	4.96	33.5	<1.30		<4.20
T46W	9	11002	05 29 86	08:45	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T46WC	2	11002	05 29 86	08:45	*<5.7	*<11.0	*<4.70	*<5.90	*<4.70	*<4.70	*<7.60	*<10.0	<3.00	*<6.10	*<11.0	*<14.0		*<17.0
T4CC	4	02019	06 24 86	09:06	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	15	02019	06 24 86	09:06	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	5	02040	06 27 86	14:01	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	17	02040	06 27 86	14:01	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	6	02035	06 25 86	09:02	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	20	02035	06 25 86	09:02	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	7	02037	06 23 86	11:26	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	22	02037	06 23 86	11:26	<11	<0.070	<0.070	<0.060	<0.053	0.437	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	8	02036	06 23 86	15:55	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	23	02036	06 23 86	15:55	<11	<0.070	<0.070	<0.060	<0.053	0.229	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	9	02039	06 24 86	10:05	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	24	02039	06 24 86	10:05	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	11	22021	06 12 86	09:37	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	26	22021	06 12 86	09:37	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	12	22024	06 12 86	07:28	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	27	22024	06 12 86	07:28	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	13	23142	06 26 86	08:47	650	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	28.2	<14.0		<17.0
T4CW	34	23142	06 26 86	08:47	96	<0.350	<0.350	<0.400	<0.265	<0.300	<0.260	<0.350	<1.80	3.64	17.8	<1.30		<4.20
T4CC	15	23177	06 12 86	15:00	24	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	36	23177	06 12 86	15:00	[illegible]	<0.070	0.107	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	16	23179	06 12 86	09:42	510	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	3.56	9.36	43.7	34.[illegible]		<17.0
T4CW	37	23179	06 12 86	09:42	590	1.92	<0.700	<0.060	<0.530	<0.060	<0.520	<0.700	<1.80	15.6	78.5	66.[illegible]		29.1
T4CC	17	23185	06 19 86	10:03	[illegible]	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	41	23185	06 19 86	10:03	4600	<0.070	0.455	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	2.35	2.85	2.32		<4.20
T4CC	18	23188	06 19 86	11:46	[illegible]	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	45.1	<14.0		<17.0
T4CW	44	23188	06 19 86	11:46	[illegible]100	<0.070	0.192	<0.060	<0.053	0.083	0.110	0.095	<1.80	3.71	31.2	<1.30		<4.20
T4CC	19	23190	06 19 86	12:41	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	45	23190	06 19 86	12:41	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T46W	16	24150	05 29 86	09:00	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T46WC	[illegible]	24150	05 29 86	09:00	*<5.7	*<11.0	*<4.70	*<5.90	*<4.70	*<4.70	*<7.60	*<10.0	<3.00	*<6.10	*<11.0	*<14.0		*<17.0
T4CC	20	24178	06 19 86	14:22	210	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		67.8
T4CW	50	24178	06 19 86	14:22	290	<0.140	<0.140	<0.120	<0.106	0.665	0.735	<0.140	<1.80	<2.00	<1.10	20.[illegible]		122
T4CC	21	25023	06 25 86	08:36	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	59	25023	06 25 86	08:36	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	23	26041	06 27 86	10:26	2300	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	183	<6.10	64.9	<14.0		<17.0
T4CW	65	26041	06 27 86	10:26	3100	<0.700	6.53	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	<2.00	56.1	<1.30		<4.20
T4CC	22	26066	06 25 86	09:25	78	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	39.1	268	<14.0		<17.0
T4CW	64	26066	06 25 86	09:25	80	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	32.8	342	1.39		<4.20
T4CC	24	26073	06 26 86	09:52	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	66	26073	06 26 86	09:52	<11	<0.700	<0.730	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	25	26083	06 23 86	14:52	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	68	26083	06 23 86	14:52	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	26	26084	06 23 86	13:57	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	69	26084	06 23 86	13:57	<11	<0.070	<0.070	<0.060	<0.053	0.204	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	27	26085	06 26 86	14:20	92	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	70	26085	06 26 86	14:20	110	<0.700	1.85	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	<2.00	<1.10	<1.30		<4.20

METHOD CODE:					WB	WB	WB	WB	WB	WB	YB	YB	YB	YB	YB	YB	YB	YB
PARAMETER:					MIBK	BENZENE	TOLUEN	ETHYLBENZ	M-XYL	O&P-XYL	METHYLCL	11DCE	11DCLE	T12DCE	CHCL3	12DCLE	111TCE	CCL4
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
GRP.	#	SAMPLE ID	DATE	TIME														
T4CC	3	01020	06/25/86	10:30	<2.00	<10.0	<1.00	<1.00	<1.00	<2.00	11.4		16.6	4.19	1170	1.53	2.71	<2.00
T4CW	5	01020	06/25/86	10:30	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	6.16	2.75	<24.0	<12.0	>200	<6.10	<17.0	<24.0
T4BW	9	11002	05/29/86	06:45	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4BWC	2	11002	05/29/86	06:45	<2.00	1.96	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CC	4	02019	06/24/86	09:06	5.71	16.5	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	15	02019	06/24/86	09:06	<12.9	37.2	4.52	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	5	02030	06/27/86	14:01	<2.00	<1.00	1.49	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	168	<1.00	<1.00	8.84
T4CW	17	02030	06/27/86	14:01	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	115	<0.610	<1.70	9.53
T4CC	6	02035	06/25/86	09:02	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	14.9		7.52	<2.00	283	<1.00	<1.00	7.84
T4CW	20	02035	06/25/86	09:02	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	8.38	<1.20	195	<0.610	<1.70	7.54
T4CC	7	02037	06/23/86	11:26	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	5.56	<1.00	<1.00	<2.00
T4CW	22	02037	06/23/86	11:26	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	2.79	<0.610	<1.70	<2.40
T4CC	8	02038	06/23/86	15:55	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	9.18	<1.00	<1.00	<2.00
T4CW	23	02038	06/23/86	15:55	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	7.44	<0.610	<1.70	<2.40
T4CC	9	02039	06/24/86	10:05	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	24	02039	06/24/86	10:05	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	11	22021	06/12/86	09:37	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	17.5	<1.00	<1.00	<2.00
T4CW	26	22021	06/12/86	09:37	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	11.6	<0.610	<1.70	<2.40
T4CC	12	22024	06/12/86	0[illegible]:28	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	27	22024	06/12/86	0[illegible]:28	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	13	23142	06/26/86	08:47	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	34	23142	06/26/86	08:47	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	15	23177	06/12/86	15:00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	1.99	<1.00	<1.00	<2.00
T4CW	36	23177	06/12/86	15:00	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	16	23179	06/12/86	09:42	<2.00	40.2	<1.00	<1.00	<1.00	3.24	104		3.40	<2.00	32000	115	<1.00	<2.00
T4CW	37	23179	06/12/85	09:42	<12.9	38.7	2.71	3.59	<1.35	3.52	125	<1.10	3.70	<1.20	22500	<0.610	<1.70	<2.40
T4CC	17	23185	06/19/86	10:03	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	41	23185	06/19/86	10:03	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	18	23188	06/19/86	11:46	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	1.53	<1.00	<2.00
T4CW	44	23188	06/19/86	11:46	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	1.59	<1.70	<2.40
T4CC	19	23190	06/19/86	12:41	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	45	23190	06/19/86	12:41	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4BW	16	24150	05/29/86	09:00	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4BWC	3	24150	05/29/86	09:00	<2.00	3.70	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CC	20	24176	06/19/86	14:22	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	1120	1.79	<1.00	4.53
T4CW	50	24176	06/19/86	14:22	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	504	<0.610	<1.70	4.22
T4CC	21	25023	06/25/86	06:36	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	59	25023	06/25/86	06:36	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	23	26041	06/27/86	10:28	32.7	58.1	953	<1.00	<1.00	<2.00	<5.00		<2.00	2.19	<1.00	140	<1.00	<2.00
T4CW	65	26041	06/27/86	10:28	<12.9	50.6	1070	<1.28	1.71	19.2	<5.00	<1.10	<1.20	<1.20	<1.40	2.25	<1.70	<2.40
T4CC	22	26066	06/25/86	09:25	<2.00	2.10	<1.00	<1.00	<1.00	<2.00	10.2		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	64	26066	06/25/86	09:25	<12.9	2.17	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	24	26073	06/26/86	09:52	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	15.1	<1.00	<1.00	5.10
T4CW	66	26073	06/26/86	09:52	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	12.0	<0.610	<1.70	5.75
T4CC	25	26083	06/23/86	14:52	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	68	26083	06/23/86	14:52	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	26	26084	06/23/86	13:57	<2.00	16.4	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4CW	69	26084	06/23/86	13:57	<12.9	6.61	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC	27	26085	06/26/86	14:20	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	27.0	<1.00	<1.00	<2.00
T4CW	70	26085	06/26/86	14:20	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	21.1	<0.610	<1.70	<2.40

FLD.GRP.	#	SAMPLE ID	DATE	TIME	112TCE	TCLEE	CLC6H5
PARAMETER:					112TCE	TCLEE	CLC6H5
UNITS:					UG/L	UG/L	UG/L
T4CC	3	01020	06/25/86	10:30	<1.00	8.03	50.3
T4CW	3	01020	06/25/86	10:30	<100	4.67	12.7
T4BW	9	11002	05/29/86	08:45	<1.00	<1.30	<0.580
T4BWC	2	11002	05/29/86	08:45	<1.00	<1.00	<2.00
T4CC	4	02019	06/24/86	09:06	<1.00	<1.00	<2.00
T4CW	15	02019	06/24/86	09:06	<1.00	<1.30	<0.580
T4CC	5	02030	06/27/86	14:01	<1.00	<1.00	<2.00
T4CW	17	02030	06/27/86	14:01	<1.00	<1.30	<0.580
T4CC	6	02035	06/25/86	09:02	<1.00	2.63	<2.00
T4CW	20	02035	06/25/86	09:02	<1.00	<1.30	8.64
T4CC	7	02037	06/23/86	11:26	<1.00	<1.00	<2.00
T4CW	22	02037	06/23/86	11:26	<1.00	<1.30	<0.580
T4CC	8	02036	06/23/86	15:55	<1.00	<1.00	<2.00
T4CW	23	02036	06/23/86	15:55	<1.00	<1.30	<0.580
T4CC	9	02039	06/24/86	10:05	<1.00	<1.00	<2.00
T4CW	24	02039	06/24/86	10:05	<1.00	<1.30	<0.580
T4CC	11	22021	06/12/86	09:37	<1.00	<1.00	<2.00
T4CW	26	22021	06/12/86	09:37	<1.00	<1.30	<0.580
T4CC	12	22024	06/12/86	07:28	<1.00	<1.00	<2.00
T4CW	27	22024	06/12/86	07:28	<1.00	<1.30	<0.580
T4CC	13	23142	06/26/86	08:47	<1.00	<1.00	<2.00
T4CW	34	23142	06/26/86	08:47	<5.00	<1.30	<0.580
T4CC	15	23177	06/12/86	15:00	<1.00	<1.00	<2.00
T4CW	36	23177	06/12/86	15:00	<1.00	<1.30	<0.560
T4CC	16	23179	06/12/86	09:42	<1.00	75.2	<2.00
T4CW	37	23179	06/12/86	09:42	<1.00	75.5	<0.580
T4CC	17	23185	06/19/86	10:03	<1.00	<1.00	<2.00
T4CW	41	23185	06/19/86	10:03	<1.00	<1.30	<0.580
T4CC	18	23188	06/19/86	11:46	<1.00	<1.00	<2.00
T4CW	44	23188	06/19/86	11:46	<1.00	<1.30	<0.580
T4CC	19	23190	06/19/86	12:41	<1.00	<1.00	<2.00
T4CW	45	23190	06/19/86	12:41	<1.00	<1.30	<0.580
T4BW	16	24150	05/29/86	09:00	<1.00	<1.30	<0.560
T4BWC	3	24150	05/29/86	09:00	<1.00	<1.00	<2.00
T4CC	20	24178	06/19/86	14:22	<1.00	57.4	<2.00
T4CW	50	24178	06/19/86	14:22	<1.00	49.2	<0.580
T4CC	21	25023	06/25/86	08:36	<1.00	<1.00	<2.00
T4CW	59	25023	06/25/86	08:36	<1.00	<1.30	<0.580
T4CC	23	26041	06/27/86	10:28	<1.00	<1.00	2.16
T4CW	65	26041	06/27/86	10:28	<1.00	<1.30	2.77
T4CC	22	26066	06/25/86	09:25	<1.00	4.27	9.67
T4CW	64	26066	06/25/86	09:25	<1.00	3.96	7.60
T4CC	24	26073	06/26/86	09:52	<1.00	<1.00	<2.00
T4CW	66	26073	06/26/86	09:52	<1.00	<1.30	<0.580
T4CC	25	26083	06/23/86	14:52	<1.00	<1.00	<2.00
T4CW	66	26083	06/23/86	14:52	<1.00	<1.30	<0.580
T4CC	26	26084	06/23/86	13:57	<1.00	<1.00	<2.00
T4CW	69	26084	06/23/86	13:57	<1.00	<1.30	<0.580
T4CC	27	26085	06/26/86	14:20	<1.00	<1.00	<2.00
T4CW	70	26085	06/26/86	14:20	<1.00	<1.30	<0.580

PARAMETER: UNITS: Q.C. GRP.	#	SAMPLE ID	DATE	TIME	DBCP UG/L	DBCP UG/L	DBCP UG/L	DCPD UG/L	DCPD UG/L	DCPD UG/L
T4CC	3	01020	06/25/86	10:30		27	16		<4.7	<2.0
T4CW	3	01020	06/25/86	10:30	16.1			<9.31		
T45W	9	11002	05/29/86	08:45	<0.130			<9.31		
T46WC	2	11002	05/29/86	08:45		*<15	<4.0		*<4.7	<2.0
T4CC	4	02019	06/24/86	09:06		<15	<4.0		<4.7	<2.0
T4CW	15	02019	06/24/86	09:06	<0.130			<9.31		
T4CC	5	02030	06/27/86	14:01		<15	<4.0		<4.7	<2.0
T4CW	17	02030	06/27/86	14:01	<0.130			<9.31		
T4CC	6	02035	06/25/86	09:02		<15	<4.0		<4.7	<2.0
T4CW	20	02035	06/25/86	09:02	<0.130			<9.31		
T4CC	7	02037	06/23/86	11:26		<15	<4.0		<4.7	<2.0
T4CW	22	02037	06/23/86	11:26	<0.130			<9.31		
T4CC	8	02038	06/23/86	15:55		<15	<4.0		<4.7	<2.0
T4CW	23	02038	06/23/86	15:55	<0.130			<9.31		
T4CC	9	02039	06/24/86	10:05		<15	<4.0		<4.7	<2.0
T4CW	24	02039	06/24/86	10:05	<0.130			<9.31		
T4CC	11	22021	06/12/86	09:37		<15	<4.0		<4.7	<2.0
T4CW	26	22021	06/12/86	09:37	<0.130			<9.31		
T4CC	12	22024	06/12/86	07:28		<15	<4.0		<4.7	<2.0
T4CW	27	22024	06/12/86	07:28	<0.130			<9.31		
T4CC	13	23142	06/26/86	08:47		<15	<4.0		<4.7	<2.0
T4CW	34	23142	06/26/86	08:47	<0.130			<9.31		
T4CC	15	2317[illegible]	06/12/86	15:00		<15	<4.0		<4.7	<2.0
T4CW	36	2317[illegible]	06/12/86	15:00	<0.130			<9.31		
T4CC	16	23179	06/12/86	09:42		<15	<4.0		810	530
T4CW	37	23179	06/12/86	09:42	0.953			736		
T4CC	17	2318[illegible]	06/19/86	10:03		<15	<4.0		<4.7	<2.0
T4CW	41	2318[illegible]	06/19/86	10:03	<0.130			<9.31		
T4CC	18	231[illegible]	06/19/86	11:46		<15	<4.0		42	15
T4CW	44	231[illegible]	06/19/86	11:46	<0.130			16.6		
T4CC	19	23190	06/19/86	12:41		<15	<4.0		<4.7	<2.0
T4CW	45	23190	06/19/86	12:41	<0.130			<9.31		
T46W	16	24152	05/29/86	09:00	<0.130			<9.31		
T46WC	3	24152	05/29/86	09:00		*<15	<4.0		*<4.7	<2.0
T4CC	20	2417[illegible]	06/19/86	14:22		<15	9.5		24	35
T4CW	50	2417[illegible]	06/19/86	14:22	7.25			34.2		
T4CC	21	25023	06/25/86	08:36		<15	<4.0		<4.7	<2.0
T4CW	59	25023	06/25/86	08:36	<0.130			<9.31		
T4CC	23	26041	06/27/86	10:28		<15	<4.0		89	83
T4CW	65	26041	06/27/86	10:28	<0.130			40.5		
T4CC	22	26066	06/25/86	09:25		<15	<4.0		<4.7	<2.0
T4CW	64	26066	06/25/86	09:25	<0.130			<9.31		
T4CC	24	26073	06/26/86	09:52		<15	<4.0		<4.7	<2.0
T4CW	66	26073	06/26/86	09:52	<0.130			<9.31		
T4CC	25	26083	06/23/86	14:52		<15	<4.0		<4.7	<2.0
T4CW	68	26083	06/23/86	14:52	<0.130			<9.31		
T4CC	26	26084	06/23/86	13:57		<15	<4.0		<4.7	<2.0
T4CW	69	26084	06/23/86	13:57	<0.130			<9.31		
T4CC	27	26085	06/26/86	14:20		<15	<4.0		<4.7	<2.0
T4CW	70	26085	06/26/86	11:20	0.239			<9.31		

PARAMETER: UNITS: FLD GRP	#	SAMPLE ID	DATE	TIME	DIMP UG/L	HCCPD UG/L	ALDRIN UG/L	ISODRIN UG/L	P,P'-DDE UG/L	DIELDRIN UG/L	ENDRIN UG/L	P,P'-DDT UG/L	DMDS UG/L	1,4-OXAT UG/L	1,4-DITH UG/L	CPMS UG/L	BTZ UG/L	CPMSO UG/L
T4CC	26	26056	06/24/86	13:55	170	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	71	26056	06/24/86	13:55	210	<0.070	<0.070	<0.060	<0.053	0.020	0.142	<0.070	<1.80	<2.00	13.6	<1.30		<4.20
T4CC	29	26127	06/26/86	12:58	1900	<11.0	5.20	<5.90	<4.70	11.7	<7.60	<10.0	<3.00	<6.10	74.[illegible]	<14.0		<17.0
T4CW	72	26127	06/26/86	12:58	1900	<0.070	0.667	<0.300	<0.053	1.49	0.491	<0.070	<1.80	5.35	55.6	<1.30		<4.20
T4CC	30	26128	06/24/86	13:34	1000	<11.0	5.64	<5.90	<4.70	50.9	7.64	<10.0	<3.00	<6.10	42.2	<14.0		<17.0
T4CW	73	26128	06/24/86	13:34	1700	<0.700	1.00	<0.600	<0.530	6.41	1.34	<0.700	<1.80	7.02	72.4	4.62		<4.20
T4CC	31	26133	06/27/86	09:06	690	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<300	26.5	69.1	527		<17.0
T4CW	74	26133	06/27/86	09:06	950	<0.700	<0.700	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	15.4	59.7	612		14.6
T4CC	32	26140	06/24/86	08:52	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	75	26140	06/24/86	08:52	<11	<0.070	<0.070	<0.060	<0.053	0.537	0.103	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	33	27040	06/19/86	09:15	36	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	80	27040	06/19/86	09:15	44	<0.700	<0.700	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	44	27062	06/12/86	10:52	27	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	87	27062	06/12/86	10:52	29	<0.070	<0.070	<0.060	<0.053	0.119	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	35	28025	06/19/86	14:35	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	89	28025	06/19/86	14:35	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4WC	6	28027	06/04/86	07:44	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4WW	25	28027	06/04/86	07:44		<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4CC	10	[illegible]005	06/11/86	11:50	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	25	[illegible]005	06/11/86	11:50	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4WC	7	33060	06/04/86	08:56	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4WW	[illegible]	33060	06/04/86	08:56		<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4CC	[illegible]	35012	06/11/86	16:16	1500	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	26.7	192	<14.0		<17.0
T4CW	94	35012	06/11/86	16:16	10000	<0.070	0.988	<0.060	<0.053	0.220	<0.052	<0.070	<1.80	37.4	345	<1.30		<4.20
T4CC	[illegible]	35013	06/12/86	14:21	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	95	35013	06/12/86	14:21	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	[illegible]	35052	06/25/86	12:01	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4CW	100	35052	06/25/86	12:01	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC	49	35065	06/30/86	09:45	2500	<11.0	<4.70	<5.90	<4.70	<4.70	[illegible]	<10.0	<30.0	23.7	134	<14.0		<17.0
T4CW	10[illegible]	35065	06/30/86	09:45	1900	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	9.44	86.7	<1.30		10.2
T4WC	1	03523	06/04/86	13:47	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4WW	1	03523	06/04/86	13:47		<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4CC	40	36001	06/23/86	14:09	5.7	<11.0	<4.70	<5.90	<4.70	<4.70	6.00	<10.0	129	<6.10	<11.0	69.5		<17.0
T4CW	10[illegible]	36001	06/23/86	14:09	<11	<0.700	0.700	<0.600	<0.530	0.659	5.66	<0.700	22.6	<2.00	<1.10	59.6		<4.20
T4CC	41	36076	06/25/86	14:24	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3000	27.4	28.2	<14.0		<17.0
T4CW	11[illegible]	36076	06/25/86	14:24	<11	<1.40	<1.40	<1.20	<1.06	<1.20	<1.04	<1.40	<1.80	32.6	42.8	14.4		19.5
T4CC	4[illegible]	36082	06/27/86	10:02	490	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<300	179	972	<14.0		<17.0
T4CW	114	36082	06/27/86	10:02	590	<0.700	4.67	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	153	679	4.51		<4.20
T4CC	4[illegible]	36112	06/30/86	08:52	1000	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	76.6	450	<14.0		<17.0
T4CW	117	36112	06/30/86	08:52	1500	<0.070	<0.070	0.149	<0.053	<0.060	<0.052	<0.070	<1.80	73.3	541	2.59		<4.20
PGW2	2	37307	06/18/86	11:41	41	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
PGW2C	2	37307	06/18/86	11:41	35	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
PGW2	3	37306	06/16/86	15:17	330	<0.070	<0.070	<0.060	<0.053	0.521	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		61.8
PGW2C	3	37306	06/16/86	15:17	270	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		49.2
PGW2	5	37312	06/17/86	11:13	22	<0.070	<0.070	<0.120	<0.053	1.42	1.11	<0.140	<1.80	<2.00	<1.10	<1.30		<4.20
PGW2C	1	37312	06/17/86	11:13	14	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
PGW2	12	37332	06/16/86	11:58	<11	<0.070	<0.070	<0.060	<0.053	0.[illegible]63	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
PGW2C	5	37332	06/16/86	11:58	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
PGW2	21	37341	06/13/86	08:34	1100	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
PGW2C	6	37341	06/13/86	08:39	36	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0

Station / date	[illegible] MG	34030 WB BENZENE UG/L	34010 WB TOLUENE UG/L	[illegible] WB ETHYLBENZENE UG/L	[illegible] WB [illegible] UG/L	[illegible] WB [illegible] UG/L	[illegible] TB METHYLENE [illegible] UG/L	34501 TB 11DCE UG/L	34496 TB 11DCLE UG/L	34546 TB T12DCE UG/L	32106 TB CHCL3 UG/L	34531 TB 12DCLE UG/L	34506 TB 111TCE UG/L	32102 TB CCL4 UG/L
[illegible]	[illegible]	1.95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<200	<200	60000	<100	<100	<200
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	[illegible]	<1.20	[illegible]	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	[illegible]	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	3.77	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	[illegible]	2.74	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	12.5	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	2.25	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	1.95	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.20	<1.20	[illegible]	<0.610	<1.70	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	[illegible]	[illegible]	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<20.0	<20.0	[illegible]	<10.0	<10.0	<20.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	[illegible]	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	[illegible]	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.20	<1.20	[illegible]	<0.610	<1.70	282
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	<2000	[illegible]	<1000	<1000	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.20	[illegible]	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<200	<200	[illegible]	<100	<100	<200
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	4.15	6.91	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	[illegible]	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	[illegible]	[illegible]	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	[illegible]	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	[illegible]	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	[illegible]	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00

[illegible]	98[illegible]	39398	39330	39380	39[illegible]	39350	39390	39300	81[illegible]	98564	98563	98562	81512	98561
	[illegible]	[illegible]	ALDRIN	[illegible]	[illegible]	CHLORDAN	ENDRIN	P,P'-DDT	[illegible]	1,4 DXAT	1,4-DITH	CPMS	BTZ	CPMSO
	[illegible]	UG/L	[illegible]	[illegible]	[illegible]	[illegible]	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<2.00	<1.10	<1.30		<4.20
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10.0	[illegible]	<6.10	<11.0	<14.0		<17.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<2.00	<1.10	<1.30		<4.20
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10.0	[illegible]	<6.10	<11.0	<14.0		<17.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10.0	[illegible]	<6.10	<11.0	<14.0		<17.0
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10.0	[illegible]	<6.10	[illegible]	<14.0		<17.0
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10.0	[illegible]	<6.10	<11.0	<14.0		<17.0
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<2.00	<1.10	<1.30		<4.20
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10.0	[illegible]	<6.10	<11.0	<14.0		<17.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<2.00	<1.10	<1.30		<4.20
[illegible]	*[illegible]	*[illegible]	*[illegible]	*[illegible]	*[illegible]	*[illegible]	*[illegible]	*[illegible]	[illegible]	*<6.10	*<11.0	*<14.0		*<17.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<10.0	[illegible]	<6.10	<11.0	<14.0		<17.0
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<2.00	<1.10	<1.30		8.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<6.10	[illegible]	<14.0		<17.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<6.10	[illegible]	<14.0		<17.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<2.00	<1.10	<1.30		<4.20
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		<85.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<0.520	[illegible]	[illegible]	[illegible]	<1.10	<1.30		<4.20

[illegible]	DATE TIME	81551 [illegible]	34030 WB BENZENE UG/L	34010 WB TOLUENE UG/L	34[illegible] WB [illegible]BENZENE UG/L	[illegible] WB M[illegible] UG/L	96[illegible] WB O&P [illegible] UG/L	3442[illegible] TL METHYLCL UG/L	34501 T8 11DCE UG/L	34496 T8 11DCLE UG/L	34546 T8 T12DCE UG/L	32106 T8 CHCL3 UG/L	34531 T8 12DCLE UG/L	34506 T8 111TCE UG/L	32102 T8 CCL4 UG/L
[illegible]	[illegible]	[illegible]	<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	4.01	<1.00	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	<2.00	<1.00	<1.00	[illegible]	[illegible]	<2.00	<5.00		<2.00	<2.00	2.21	<1.00	<1.00	<2.00
[illegible]	[illegible]	<2.00	<1.00	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	7.38	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]		<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	8.64	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	<2.00	[illegible]	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	4.21	4.40	<1.00	<1.00	<2.00
[illegible]	[illegible]		2.96	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	2.54	3.29	<0.610	<1.70	<2.40
[illegible]	[illegible]	<2.00	36.6	<1.00	[illegible]	[illegible]	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]		266	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	<2.00	12.1	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	<1.[illegible]0	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	<2.00	<1.00	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]	<2.00	<1.00	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	10.9	<1.00	<1.00	<1.00	<2.00
[illegible]	[illegible]		<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	[illegible].29	<1.40	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	<1.20	<1.20	27.3	<0.610	<1.70	<2.40
[illegible]	[illegible]	<2.00	<1.00	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	<2.00	39.7	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	<1.00	<1.00	[illegible]	<1.00	<2.00	<5.00		<2.00	3.67	2.86	<1.00	<1.00	<2.00
[illegible]	[illegible]	[illegible]	<1.34	[illegible]	[illegible]	[illegible]	<2.47	<5.00	<1.10	1.75	3.62	1.95	<0.610	<1.70	<2.40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	441	[illegible]	846	<500		<200	<200	<100	<100	<100	<200
[illegible]	[illegible]	[illegible]	21,000	[illegible]	[illegible]	[illegible]	1.40	<5.00	<1.10	<1.20	<1.20	<1.40	8.00	<1.70	<2.40

TEST CODE:				34511	34475	34301
METHOD CODE:				16	16	16
PARAMETER:				112TCE	TCLEE	CLC6H5
UNIT:				UG L	UG L	UG L
WELL GRP	#	SAMPLE ID	DATE TIME			
[illegible]	31?	37352?	06 12 86 11:32	<1.00	<1.30	<0.560
[illegible]	8?	37351?	06 12 86 11:32	<1.00	<1.00	<2.00
[illegible]	32?	37354	06 11 86 10:06	<1.00	<1.30	<0.560
[illegible]	4	37354	06 11 86 10:06	<1.00	<1.00	<2.00
74M?	2	04007?	06 04 86 14:13	<1.00	1.63	<2.00
74M?	2	0400?	06 04 86 14:13	<1.00	2.11	<0.560
74M?	[illegible]	0404?	06 04 86 09:24	<1.00	<1.00	<2.00
74M?	10?	0404?	06 04 86 09:24	<1.00	<1.30	<0.560
74M?	4	0403?	06 04 86 09:01	<1.00	<1.00	<2.00
74M?	13?	04037?	06 04 86 09:01	<1.00	<1.30	<0.560
74M?	4	0600?	06 04 86 11:37	<1.00	<1.30	<0.560
74M?	4	600?	06 04 86 11:37	<1.00	<1.00	<2.00
74M?	5	0100?	05 29 86 11:26	<1.00	<1.30	<0.560
74M?	1	0100?	05 29 86 11:26	<1.00	<1.00	<2.00
74M?	5?	0300?	06 05 86 11:05	<1.00	2.01	<2.00
74M?	15?	0400?	06 05 86 11:05	<1.00	1.64	<0.560
[illegible]	[illegible]	[illegible]	07 02 86 09:32	<1.00	6.56	<0.560
[illegible]	[illegible]	[illegible]	07 01 86 09:32	<1.00	5.90	<2.00
[illegible]	1	[illegible]	06 25 86 12:50	<1.00	15.8	<2.00
[illegible]	1	[illegible]	06 25 86 12:50	<1.00	10.8	<0.560
[illegible]	2	01014?	07 01 86 [illegible]	<1.00	<1.00	<2.00
[illegible]	2	01014?	07 01 86 [illegible]	<1.00	<1.30	<0.560

[illegible]					99133	99133	99133	77965	77965	77965
METHOD CODE:					JB	BBB	MB	RB	BBB	MB
PARAMETER					DBCP	DBCP	DBCP	DCPD	DCPD	DCPD
UNIT					UG L	UG L	UG L	UG L	UG L	UG L
[illegible]	#	SAMPLE ID	DATE	TIME						
T4CC	25	26046	06 24 86	13:55		<15	<4.0		<4.7	<2.0
T4CW	[illegible]	26046	06 24 86	13:55	<0.130			<9.31		
T4CC	29	26127	06 26 86	12:58		<15	<4.0		<4.7	<2.0
T4CW	72	26127	06 26 86	12:58	<0.130			<9.31		
T4CC	30	26128	06 24 86	13:34		<15	<4.0		<4.7	<2.0
T4CW	73	26128	06 24 86	13:34	<0.130			<9.31		
T4CC	31	26133	06 27 86	09:0[illegible]		39	<400		1100	1000
T4CW	74	26133	06 27 86	09:0[illegible]	26.4			935		
T4CC	32	26140	06 24 86	08:52		<15	<4.0		<4.7	<2.0
T4CW	75	26140	06 24 86	08:52	<0.130			<9.31		
T4CC	33	27040	06 19 86	09:15		<15	<4.0		<4.7	<2.0
T4CW	80	27040	06 19 86	09:15	0.433			<9.31		
T4CC	34	27052	06 12 86	10:52		<15	<4.0		<4.7	<2.0
T4CW	87	27052	06 12 86	10:52	0.230			<9.31		
T4CC	35	28025	06 19 86	14:35		<15	<4.0		<4.7	<2.0
T4CW	[illegible]	28025	06 19 86	14:35	<0.130			<9.31		
T4WC	5	28027	06 04 86	07:44		<15	<4.0		<4.7	<2.0
T4WW	[illegible]	28027	06 04 86	07:44	<0.130					
T4CC	20	29005	06 11 86	11:52		<15	<4.0		<4.7	6.2
T4CW	25	29005	06 11 86	11:52	<0.130			<9.31		
T4WC	7	35010	06 04 86	08:55		<15	<4.0		<4.7	<2.0
T4WW	26	35010	06 04 86	08:55	<0.130					
T4CC	36	35012	06 11 86	10:16		<15	<4.0		<4.7	<2.0
T4CW	94	35012	06 11 86	10:16	<0.130			<9.31		
T4CC	37	35013	06 12 86	14:21		<15	<4.0		<4.7	<2.0
T4CW	95	35013	06 12 86	14:21	<0.130			<9.31		
T4CC	38	35052	06 25 86	12:01		<15	<4.0		<4.7	<2.0
T4CW	100	35052	06 25 86	12:01	<0.130			<9.31		
T4CC	39	35065	06 30 86	09:48		<15	<40		70	<20
T4CW	105	35065	06 30 86	09:48	<0.130			33.9		
T4W	1	35523	06 04 86	13:47		53	56		<4.7	<2.0
T4WW	1	35523	06 04 86	13:47	40.9					
T4CC	40	36001	06 23 86	14:09		200	140		73	5[illegible]
T4CW	109	36001	06 23 86	14:09	141			34.2		
T4CC	41	36076	06 25 86	14:24		<15	<4000		<4.7	<2000
T4CW	113	36076	06 25 86	14:24	0.644			<9.31		
T4CC	42	36062	06 27 86	10:02		<15	<400		28	<200
T4CW	114	36062	06 27 86	10:02	<0.130			17.9		
T4CC	43	36112	06 30 86	08:52		<15	<4.0		<4.7	<2.0
T4CW	117	36112	06 30 86	08:52	<0.130			<9.31		
[illegible]Wm2	2	37327	06 18 86	11:41	<0.130			<9.31		
[illegible]Wm2C	2	37327	06 18 86	11:41		<15	<4.0		<4.7	<2.0
[illegible]m2	3	37308	06 16 86	15:17	0.676			111		
[illegible]m2C	3	37308	06 16 86	15:17		<15	<4.0		150	1.0
[illegible]m2	5	37312	06 17 86	11:13	<0.130			<9.31		
[illegible]m2C	1	37312	06 17 86	11:13		<15	<4.0		<4.7	<2.0
[illegible]m2	12	37332	06 16 86	11:58	<0.130			<9.31		
[illegible]m2C	5	37332	06 16 86	11:58		<15	<4.0		<4.7	<2.0
[illegible]m2	21	37343	06 13 86	08:[illegible]4	<0.130			<9.31		
[illegible]m2C	6	37343	06 13 86	08:39		<15	<4.0		<4.7	6.4

METHOD CODE:
PARAMETER:
UNITS:

SITE GRP.	#	SAMPLE ID	DATE	TIME	[illegible] 08 DBCP UG/L	[illegible] 668 DBCP UG/L	[illegible] M6 DBCP UG/L	[illegible] R6 DCPD UG/L	[illegible] 66E DCPD UG/L	[illegible] M8 DCPD UG/L
POW	31	37353	06 12 86	11:32	<0.130			<9.31		
POW2	5	3735[illegible]	06 12 86	11:32		<15	<4.0		<4.[illegible]	<2.0
POW	32	[illegible]354	06 11 86	10:06	<0.130			<9.31		
POW2	4	37354	06 11 86	10 06		<15	<4.0		<4.[illegible]	<2.0
T4W	2	0400[illegible]	06 04 86	14.13		<15	<4.0		<4.[illegible]	<2.0
T4WW	[illegible]	0400[illegible]	06 04 86	14.1[illegible]	<0.130					
T4W	[illegible]	040[illegible]	06 04 86	09:24		<15	<4.0		<4.[illegible]	<2.0
T4WW	10	040[illegible]	06 04 86	09:24	<0.130					
T4W	4	040[illegible]	06 04 86	09.01		<15	<4.0		<4.[illegible]	<2.0
T4WW	[illegible]	040[illegible]	06 04 86	09 01	<0.130					
T45W	4	[illegible]	06 04 86	11.3[illegible]	<0.130			<9.31		
T40W	4	[illegible]	06 04 86	11:37		<15	<4.0		<4.[illegible]	<2.0
T45W	5	[illegible]	[illegible]	11.26	<0.130			<9.31		
T40W	[illegible]	[illegible]	[illegible]	11.26		*<15	<4.0		*<4.7	<2.0
T4W	5	[illegible]	[illegible]	11.05		<15	<4.0		<4.7	<2.0
T4WW	[illegible]	[illegible]	[illegible]	11.05	<0.130					
POW	6	[illegible]	[illegible]	09:32	0.332			<9.31		
POW2	7	[illegible]	[illegible]	09:32		<15	<4.0		<4.7	<2.0
T4C[illegible]	1	[illegible]	[illegible]	12.50		<15	<4.0		<4.7	<2.0
T4CW	1	[illegible]	[illegible]	12.50	0.244			<9.31		
T4CC	2	[illegible]	[illegible]	[illegible]		<75	<400		72000	3700
T4 W	[illegible]	[illegible]	[illegible]	[illegible]	<0.130			3760		

4TH QUARTER FY 1986 TASK 4 GC/MS CONFIRMATION DATA

FIELD GROUP NUMBERS T4CC2, T4WC2, AND OPG3C ARE GC/MS RESULTS

STORET CODE:					98551	34386	39330	39430	39320	39380	39390	39300	81580	98564	98563	98562	81512	98561
METHOD CODE:					668	S8	S8	S8	S8	S8	S8	S8	U8	U8	U8	U8	U8	U8
PARAMETER:					DIMP	HCCPD	ALDRIN	ISODRIN	P,P'-DDE	DIELDRIN	ENDRIN	P,P'-DDT	DMDS	1,4-OXAT	1,4-DITH	CPMS	BTZ	CPMSO
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
LCL GRP.	#	SAMPLE ID	DATE	TIME														
T4C2	4	01021	09 18 86	14:22	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	1	01021	09 18 86	07:00	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	6	01023	09 18 86	11:09	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	2	01023	09 18 86	11:09	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	16	02020	09 17 86	11:16	<11	<0.070	<0.070	<0.060	<0.053	0.430	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	4	02020	09 17 86	11:16	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	19	02034	09 05 86	13:57	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	5	02034	09 05 86	13:57	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	20	02035	09 05 86	15:00	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	6	02035	09 05 86	15:00	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	28	22059	09 03 86	10:24	<11	<0.070	<0.070	<0.060	<0.053	0.127	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	7	22059	09 03 86	10:24	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	29	22060	09 03 86	08:05	<11	<0.070	<0.070	<0.060	<0.053	0.396	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	8	22060	09 03 86	08:05	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	31	23095	09 03 86	12:31	1100	<0.700	<0.700	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	10.8	91.0	<1.30		<4.20
T4CC2	9	23095	09 03 86	12:31	600	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	4.33	10.1	67.7	<14.0		<17.0
T4C2	33	23125	09 25 86	15:24	19	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	10	23125	09 25 86	15:24	10	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	37	23179	09 02 86	09:57	760	2.29	<1.40	<1.20	<1.06	<1.20	<1.04	<1.40	<1.80	17.9	73.0	73.4		13.6
T4CC2	12	23179	09 02 86	09:57	540	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	55.0	115		<17.0
T4C2	39	23182	09 04 86	10:12	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	14	23182	09 04 86	10:12	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	40	23184	09 04 86	14:07	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	15	23184	09 04 86	14:07	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	50	24178	09 22 86	14:50	300	0.207	<0.070	<0.060	<0.053	3.35	2.22	<0.070	<1.80	<2.00	<1.10	13.5		95.9
T4CC2	16	24178	09/22 86	14:50	>280	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		70.3
T4C2	51	24185	09/23 86	08:50	<11	<0.070	<0.070	<0.060	<0.053	0.396	0.080	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	19	24185	09 23 86	08:50	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	57	25016	09 05 86	11:06	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	0.133	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	20	25016	09 05 86	11:06	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	60	26011	09 19 86	08:54	19	<0.070	0.109	<0.060	<0.053	0.164	<0.052	<0.070	<1.80	<2.00	1.99	<1.30		<4.20
T4CC2	21	26011	09 19 86	08:54	15	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	61	26015	09 22 86	09:10	550	<0.070	<0.070	<0.060	<0.053	0.112	<0.052	<0.070	<1.80	2.46	11.7	<1.30		<4.20
T4CC2	22	26015	09 22 86	09:10	410	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	62	26017	09/22 86	10:53	150	<0.070	<0.070	<0.060	<0.053	0.103	<0.052	<0.070	<1.80	<2.00	5.27	<1.30		<4.20
T4CC2	23	26017	09 22 86	10:53	61	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	63	26020	09 23 86	08:45	9.0	<0.070	<0.070	<0.060	<0.053	0.201	<0.052	<0.070	<1.80	<2.00	2.93	<1.30		<4.20
T4CC2	24	26020	09 23 86	08:45									<3.00					
T4C2	65	26041	09 23 86	07:10	3300	<0.700	<0.700	<0.600	<0.530	<0.600	<0.520	<0.700	10.0	8.46	54.5	48.8		<42.0
T4CC2	25	26041	09 23 86	07:10	2500	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	42.3	<6.10	62.1	<14.0		<17.0
T4C2	72	26127	09 29 86	10:20	1700	<0.070	<0.070	<0.060	<0.053	2.42	0.366	1.14	<1.80	4.42	34.3	<1.30		<4.20
T4CC2	26	26127	09 29 86	10:20	1300	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	40.1	<14.0		<17.0
T4C2	74	26133	09 19 86	12:07	950	<1.40	<1.40	<0.060	<1.06	2.24	<1.04	<1.40	<1.60	11.4	31.7	360		31.4
T4CC2	27	26133	09 19 86	12:07	470	<11.0	<4.70	<5.90	<4.70	7.64	<7.60	<10.0	<300	13.0	35.3	408		18.6
T4C2	76	26142	09 24 86	07:48	<11	<0.070	<0.700	<0.060	<0.053	2.52	<0.520	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	28	26142	09 24 86	07:48	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	122	27016	09 26 86	08:22	14	<0.070	<0.070	<0.060	<0.053	0.246	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	29	27016	09 26 86	08:22	6.6	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	81	27053	09 19 86	08:52	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	30	27053	09 19 86	08:52	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0

METHOD CODE:				[illegible]	34030	34010	34371	[illegible]	[illegible]	34423	34501	34496	34546	32106	34531	34506	32102
				WB	WB	WB	WB	WB	WB	Y8	Y8	Y8	Y8	Y8	Y8	Y8	Y8
PARAMETER:				MIBK	BENZENE	TOLUEN	ETHILBENZ	M-XYL	O&P-XYL	METHYLCL	11DCE	11DCLE	T12DCE	CHCL3	12DCLE	111TCE	CCL4
UNITS:				UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
LC GRP	#	SAMPLE ID	DATE TIME														
T4C2	4	01021	09/18/86 14:22	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	1	01021	09/18/86 07:00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	6	01023	09/18/86 11:09	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	2	01023	09/18/86 11:09	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	16	02020	09/17/86 11:16	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	2.50	<1.20	31.9	<0.610	<1.70	<2.40
T4CC2	4	02020	09/17/86 11:16	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		2.82	<2.00	36.0	<1.00	<1.00	<2.00
T4C2	19	02034	09/05/86 13:57	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	4.29	<1.20	13.3	<0.610	<1.70	<2.40
T4CC2	5	02034	09/05/86 13:57	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		4.61	<2.00	14.6	<1.00	<1.00	<2.00
T4C2	20	02035	09/05/86 15:00	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	6.74	<1.20	162	<0.610	<1.70	13.5
T4CC2	6	02035	09/05/86 15:00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		10.0	<2.00	>166	<1.00	<1.00	16.7
T4C2	28	22059	09/03/86 10:24	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	14.1	<0.610	<1.70	<2.40
T4CC2	7	22059	09/03/86 10:24	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	17.9		<2.00	<2.00	9.09	<1.00	<1.00	<2.00
T4C2	29	22060	09/03/86 06:05	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	8	22060	09/03/86 06:05	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<160		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	31	23095	09/03/86 12:31	<12.9	22.0	6.40	2.85	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	1420	<0.610	<1.70	<2.40
T4CC2	9	23095	09/03/86 12:31	6.22	23.7	<1.00	<1.00	<1.00	2.25	<5.00		<2.00	<2.00	3860	4.1	<1.00	<2.00
T4C2	33	23125	09/25/86 15:24	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	1.71	<0.610	<1.70	<2.40
T4CC2	10	23125	09/25/86 15:24	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	2.24	<1.00	<1.00	<2.00
T4C2	37	23179	09/02/86 09:57	<12.9	32.6	460	<1.28	<1.35	<2.47	126	<1.10	<1.20	<1.20	26900	<0.610	<1.70	<2.40
T4CC2	12	23179	09/02/86 09:57	<2.00	31.5	<1.00	<1.00	<1.00	2.85	150		3.35	<2.00	>16600	122	<1.00	<2.00
T4C2	39	23162	09/04/86 10:12	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	14	23162	09/04/86 10:12	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	40	23163	09/04/86 14:07	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	15	23163	09/04/86 14:07	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	50	24178	09/22/86 14:50	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	124	<0.610	<1.70	2.66
T4CC2	16	24178	09/22/86 14:50	<2.00	1.14	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	163	1.39	<1.00	2.73
T4C2	51	24185	09/23/86 08:50	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	19	24185	09/23/86 08:50	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	57	25016	09/05/86 11:06	<12.9	15.4	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	20	25016	09/05/86 11:06	<2.00	5.62	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	60	26011	09/19/86 08:54	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	21	26011	09/19/86 08:54	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	61	26015	09/22/86 09:10	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	22	26015	09/22/86 09:10	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	62	26017	09/22/86 10:53	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	23	26017	09/22/86 10:53	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	63	26020	09/23/86 08:45	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	24	26020	09/23/86 08:45	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	65	26041	09/23/86 07:10	<12.9	48.4	729	2.22	<1.35	2.59	<100	<22.0	<24.0	<24.0	<28.0	19.9	<34.0	<46.0
T4CC2	25	26041	09/23/86 07:10	25.1	<27.5	<25.0	<5.00	<5.00	<10.0	<25.0		<10.0	<10.0	<5.00	<25.0	<5.00	<10.0
T4C2	72	26127	09/29/86 10:20	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	26	26127	09/29/86 10:20	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	74	26133	09/19/86 12:07	<323	562	195	6.41	8.52	55.0	<25.0	<1.10	<6.00	<600	48000	<61.0	<170	<240
T4CC2	27	26133	09/19/86 12:07	<200	536	199	<100	<100	<200	814		<200	<200	68300	<100	<100	<200
T4C2	76	26142	09/24/86 07:46	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	28	26142	09/24/86 07:46	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	122	27016	09/26/86 08:22	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	29	27016	09/26/86 08:22	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	81	27053	09/19/86 08:52	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	30	27053	09/19/86 08:52	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00

METHOD CODE:
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FLD.GRP	#	SAMPLE ID	DATE	TIME	Y8 112TCE UG/L	Y8 TCLEE UG/L	Y8 CLC6H5 UG/L
T4C2	4	01021	09/16/86	14:22	<1.00	<1.30	<0.580
T4CC2	1	01021	09/18/86	07:00	<1.00	<1.00	<2.00
T4C2	6	01023	09/18/86	11:09	<1.00	<1.30	<0.580
T4CC2	2	01023	09/18/86	11:09	<1.00	<1.00	<2.00
T4C2	16	02020	09/17/86	11:16	<1.00	<1.30	<0.580
T4CC2	4	02020	09/17/86	11:16	<1.00	<1.00	<2.00
T4C2	19	02034	09/05/86	13:57	<1.00	1.36	<0.580
T4CC2	5	02034	09/05/86	13:57	<1.00	<1.00	<2.00
T4C2	20	02035	09/05/86	15:00	<1.00	2.98	<0.580
T4CC2	6	02035	09/05/86	15:00	<1.00	3.59	<2.00
T4C2	28	22059	09/03/86	10:24	<1.00	<1.30	<0.580
T4CC2	7	22059	09/03/86	10:24	<1.00	<1.00	<2.00
T4C2	29	22060	09/03/86	08:05	<1.00	<1.30	<0.580
T4CC2	8	22060	09/03/86	08:05	<1.00	<1.00	<2.00
T4C2	31	23095	09/03/86	12:31	<1.00	31.5	<0.580
T4CC2	9	23095	09/03/86	12:31	<1.00	34.3	<2.00
T4C2	33	23125	09/25/86	15:24	<1.00	<1.30	<0.580
T4CC2	10	23125	09/25/86	15:24	<1.00	<1.00	<2.00
T4C2	37	23179	09/02/86	09:57	<1.00	67.7	<0.580
T4CC2	12	23179	09/02/86	09:57	<1.00	59.0	<2.00
T4C2	39	23182	09/04/86	10:12	<1.00	<1.30	<0.580
T4CC2	14	23182	09/04/86	10:12	<1.00	<1.00	<2.00
T4C2	40	23183	09/04/86	14:07	<1.00	<1.30	<0.580
T4CC2	15	23183	09/04/86	14:07	<1.00	<1.00	<2.00
T4C2	50	24176	09/22/86	14:50	<1.00	46.2	<0.580
T4CC2	18	24176	09/22/86	14:50	<1.00	55.7	<2.00
T4C2	51	24185	09/23/86	08:50	<1.00	<1.30	<0.580
T4CC2	19	24185	09/23/86	08:50	<1.00	<1.00	<2.00
T4C2	57	25016	09/05/86	11:06	<1.00	<1.30	<0.580
T4CC2	20	25016	09/05/86	11:06	<1.00	<1.00	<2.00
T4C2	60	26011	09/19/86	08:54	<1.00	<1.30	<0.580
T4CC2	21	26011	09/19/86	08:54	<1.00	<1.00	<2.00
T4C2	61	26015	09/22/86	09:10	<1.00	<1.30	<0.580
T4CC2	22	26015	09/22/86	09:10	<1.00	<1.00	<2.00
T4C2	62	26017	09/22/86	10:53	<1.00	<1.30	<0.580
T4CC2	23	26017	09/22/86	10:53	<1.00	<1.00	<2.00
T4C2	63	26020	09/23/86	08:45	<1.00	<1.30	<0.580
T4CC2	24	26020	09/23/86	08:45	<1.00	<1.00	<2.00
T4C2	65	26041	09/23/86	07:10	<20.0	<26.0	<11.6
T4CC2	25	26041	09/23/86	07:10	<5.00	<5.00	<10.0
T4C2	72	26127	09/29/86	10:20	<1.00	<1.30	<0.580
T4CC2	26	26127	09/29/86	10:20	<1.00	<1.00	3.52
T4C2	74	26133	09/19/86	12:07	<5.00	<6.50	<2.90
T4CC2	27	26133	09/19/86	12:07	<100	437	<200
T4C2	76	26142	09/24/86	07:48	<1.00	<1.30	<0.580
T4CC2	28	26142	09/24/86	07:48	<1.00	<1.00	<2.00
T4C2	122	27016	09/26/86	08:22	<1.00	<1.30	<0.580
T4CC2	29	27016	09/26/86	08:22	<1.00	<1.00	<2.00
T4C2	81	27053	09/19/86	08:52	<1.00	<1.30	<0.580
T4CC2	30	27053	09/19/86	08:52	<1.00	<1.00	<2.00

METHOD CODE:
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FLD.GRP.	#	SAMPLE ID	DATE	TIME	08 DBCP UG/L	6B8 DBCP UG/L	M8 DBCP UG/L	R8 DCPD UG/L	B8B DCPD UG/L	M6 DCPD UG/L
T4C2	4	01021	09/18/86	14:22	<0.130			<9.31		
T4CC2	1	01021	09/18/86	07:00		<15	<4.0		<4.7	<2.0
T4C2	6	01023	09/18/86	11:09	<0.130			<9.31		
T4CC2	2	01023	09/18/86	11:09		<15	<4.0		<4.7	<2.0
T4C2	16	02020	09/17/86	11:16	<0.130			<9.31		
T4CC2	4	02020	09/17/86	11:16		<15	<4.0		<4.7	<2.0
T4C2	19	02034	09/05/86	13:57	<0.130			<9.31		
T4CC2	5	02034	09/05/86	13:57		<15	<4.0		<4.7	<2.0
T4C2	20	02035	09/05/86	15:00	<0.130			<9.31		
T4CC2	6	02035	09/05/86	15:00		<15	<4.0		<4.7	<2.0
T4C2	[illegible]	22059	09/03/86	10:24	0.149			<9.31		
T4CC2	7	22059	09/03/86	10:24		<15	<4.0		<4.7	<2.0
T4C2	29	22060	09/03/86	08:05	<0.130			<9.31		
T4CC2	8	22060	09/03/86	08:05		<15	<4.0		<4.7	<2.0
T4C2	[illegible]	23095	09/03/86	12:31	<0.130			674		
T4CC2	9	23095	09/03/86	12:31		<15	<4.0		930	680
T4C2	[illegible]	23125	09/25/86	15:24	<0.130			<9.31		
T4CC2	10	23125	09/25/86	15:24		<15	<4.0		<4.7	<2.0
T4C2	[illegible]	23179	09/02/86	09:57	1.62			626		
T4CC2	12	23179	09/02/86	09:57		<15	<4.0		8.0	790
T4C2	[illegible]	2318[illegible]	09/04/86	10:12	<0.130			<9.31		
T4CC2	14	2318[illegible]	09/04/86	10:12		<15	<4.0		<4.7	<2.0
T4C2	4[illegible]	2318[illegible]	09/04/86	14:07	<0.130			<9.31		
T4CC2	15	2318[illegible]	09/04/86	14:07		<15	<4.0		<4.7	<2.0
T4C2	50	2417[illegible]	09/22/86	14:50	5.50			31.9		
T4CC2	1[illegible]	2417[illegible]	09/22/86	14:50		<15	5.1		56	47
T4C2	51	241[illegible]5	09/2[illegible]/86	08:50	<0.130			<9.31		
T4CC2	19	241[illegible]5	09/2[illegible]/86	08:50		<15	<4.0		<4.7	<2.0
T4C2	5[illegible]	250[illegible]	09/05/86	11:06	<0.130			<9.31		
T4CC2	20	250[illegible]	09/05/86	11:06		<15	<4.0		<4.7	<2.0
T4C2	60	26011	09/19/86	08:54	<0.130			<9.31		
T4CC2	21	26011	09/19/86	08:54		<15	<4.0		<4.7	<2.0
T4C2	61	26015	09/22/86	09:10	<0.130			<9.31		
T4CC2	22	26015	09/22/86	09:10		<15	<4.0		<4.7	<2.0
T4C2	62	26017	09/22/86	10:53	<0.130			<9.31		
T4CC2	23	26017	09/22/86	10:53		<15	<4.0		<4.7	<2.0
T4C2	63	26020	09/23/86	08:45	<0.130			<9.31		
T4CC2	24	26020	09/23/86	08:45			<4.0			<2.0
T4C2	65	26041	09/23/86	07:10	<0.130			23.5		
T4CC2	25	26041	09/23/86	07:10		<15	<20		73	47
T4C2	72	26127	09/29/86	10:20	<0.130			<9.31		
T4CC2	26	26127	09/29/86	10:20		<15	<4.0		<4.7	<2.0
T4C2	74	26133	09/19/86	12:07	25.0			736		
T4CC2	27	26133	09/19/86	12:07		30	<400		770	850
T4C2	76	26142	09/24/86	07:48	<0.130			<9.31		
T4CC2	28	26142	09/24/86	07:48		<15	<4.0		<4.7	<2.0
T4C2	122	27016	09/26/86	08:22	<0.130			<9.31		
T4CC2	29	27016	09/26/86	08:22		<15	<4.0		<4.7	<2.0
T4C2	81	27053	09/19/86	08:52	<0.130			<9.31		
T4CC2	30	27053	09/19/86	08:52		<15	<4.0		<4.7	<2.0

PARAMETER: UNITS: SITE GRP	#	SAMPLE ID	DATE	TIME	DIMP UG/L	HCCPD UG/L	ALDRIN UG/L	ISODRIN UG/L	P,P'-DDE UG/L	DIELDRIN UG/L	ENDRIN UG/L	P,P'-DDT UG/L	DMDS UG/L	1,4-OXAT UG/L	1,4-DITH UG/L	CPMS UG/L	BTZ UG/L	CPMSO UG/L
T4W2	39	33024	09/03/86	10:50	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4WC2	1	33024	09/03/86	10:50	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4W2	21	33026	08/28/86	13:53	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4WC2	2	33026	08/28/86	13:53	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4W2	23	33030	09/04/86	09:40		<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4WC2	3	33030	09/04/86	09:40	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4W2	25	33034	09/04/86	11:37		<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4WC2	4	33034	09/04/86	11:37	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	97	35037	09/05/86	12:30	<11	<0.070	<0.070	<0.060	<0.053	3.64	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	32	35037	09/05/86	12:30	<5.7	<11.0	<4.70	<5.90	<4.70	8.04	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	98	35036	09/05/86	13:31	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	33	35036	09/05/86	13:31	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	101	35058	09/08/86	10:16	<11	<0.070	<0.070	<0.060	<0.053	1.44	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	34	35058	09/08/86	10:16	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	105	35063	09/15/86	11:37	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	35	35063	09/15/86	11:37	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	106	35065	09/08/86	11:17	2500	<0.700	<0.700	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	14.2	113	<1.30		<4.20
T4CC2	36	35065	09/08/86	11:17	1500	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	104	<14.0		<17.0
T4C2	110	36065	09/26/86	11:44	43	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	37	36065	09/26/86	11:41	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4C2	114	36082	09/26/86	10:45	560	<0.700	<0.700	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	126	896	6.35		<4.20
T4CC2	39	36082	09/26/86	10:45	460	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	197	1220	<14.0		<17.0
T4C2	1[illegible]0	36121	09/26/86	11:40	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
T4CC2	38	36121	09/26/86	11:40	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
GPG3	1	37305	08/26/86	14:56	1200	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
GPG3C	1	37305	08/26/86	14:56	1000	<11.0	<1.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
GPG3	6	37313	08/26/86	10:15	[illegible]900	<0.350	<0.350	<0.300	<0.265	<0.300	<0.260	<0.350	<1.80	4.15	9.45	<1.30		<4.20
GPG3C	2	37313	08/26/86	10:15	3700	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
GPG3	7	37320	09/22/86	12:06	19	<0.070	<0.070	<0.060	<0.053	0.065	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
GPG3C	3	37320	09/22/86	12:06	13	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
GPG3	25	37347	08/25/86	10:13	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
GPG3C	5	37347	08/25/86	09:00	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
GPG3	[illegible]	37349	09/11/86	07:53	42	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
GPG3C	[illegible]	37349	09/11/86	07:53	31	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	NA	<6.10	<11.0	<14.0		<17.0
GPG3	[illegible]	37353	09/12/86	07:36	660	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
GPG3C	4	37353	09/12/86	07:36	>94	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	NA	<6.10	<11.0	<14.0		<17.0
GPG3	[illegible]	37356	09/08/86	10:43	180	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
GPG3C	[illegible]	37356	09/08/86	10:43	150	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
GPG3	35	37357	09/11/86	10:47	22	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30		<4.20
GPG3C	8	37357	09/11/86	10:47	10	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	NA	<6.10	<11.0	<14.0		<17.0
T4W2	4	04014	08/26/86	08:04	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4WC2	5	04014	08/26/86	08:04	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
T4W2	6	04021	08/25/86	10:18	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4WC2	6	04021	08/25/86	10:18	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	5.64	<6.10	<11.0	<14.0		<17.0
T4W2	6	04027	08/26/86	11:59	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070						
T4WC2	7	04027	08/26/86	11:59	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0

PARAMETER:
UNITS:

LOC.GRP.	#	SAMPLE ID	DATE	TIME	MIBK UG/L	BENZENE UG/L	TOLUEN UG/L	ETHYLBENZ UG/L	M XYL UG/L	O&P XYL UG/L	METHYLCL UG/L	11DCE UG/L	11DCLE UG/L	T12DCE UG/L	CHCL3 UG/L	12DCLE UG/L	111TCE UG/L	CCL4 UG/L
T4W2	19	33024	09 03 86	10:50		3.68	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4WC2	1	33024	09 03 86	10:50	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	47.3		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4W2	21	33026	08 28 86	13:5[illegible]		<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4WC2	2	33026	08 28 86	13:5[illegible]	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4W2	23	33030	09 04 86	09:40		<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	1.78	<0.610	<1.70	<2.40
T4WC2	3	33030	09 04 86	09:40	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	2.53	<1.00	<1.00	<2.00
T4W2	25	33034	09 04 86	11:37		<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4WC2	4	33034	09 04 86	11:37	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	1.91	<1.00	<1.00	<2.00
T4C2	97	35037	09 05 86	12:30	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	24.6	<0.610	<1.70	<2.40
T4CC2	32	35037	09 05 86	12:30	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	33.0	<1.00	<1.00	<2.00
T4C2	98	35038	09 05 86	13:31	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	33	35038	09 05 86	13:31	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	101	35058	09 08 86	10:18	<12.9	<1.34	<1.21	1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	7.83	<0.610	<1.70	<2.40
T4CC2	34	35058	09 08 86	10:18	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	9.40	<1.00	<1.00	<2.00
T4C2	105	35063	09 15 86	11:37	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<6.50	<9.60
T4CC2	35	35063	09 15 86	11:37	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	106	35065	09 08 86	11:17	<12.9	<1.34	>8.55	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	4.92	0.776	<1.70	<2.40
T4CC2	36	35065	09 08 86	11:17	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4C2	110	36065	09 26 86	11:44	<12.9	4.09	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	43.9	<0.610	<1.70	11.5
T4CC2	37	36065	09 26 86	11:41	<2.00	7.73	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	73.5	<1.00	<1.00	17.8
T4C2	114	36062	09 26 86	10:45	<12.9	<1.34	<1.21	<1.26	1.69	3.43	<5.00	<1.10	<1.20	<1.20	4.28	<0.610	<1.70	<2.40
T4CC2	38	36062	09 26 86	10:45	<2.00	<1.00	<1.00	<1.00	1.10	<2.00	<5.00		<2.00	<2.00	3.43	15.6	<1.00	<2.00
T4C2	120	36121	09 26 86	13:40	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4CC2	39	36121	09 26 86	13:40	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
GPG3	1	37305	08 26 86	14:56	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
GPG3C	1	37305	08 26 86	14:56	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
GPG3	6	37313	08 26 86	10:15	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	0.617	<1.70	<2.40
GPG3C	2	37313	08 26 86	10:15	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
GPG3	[illegible]	37320	09 22 86	12:06	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
GPG3C	[illegible]	37320	09 22 86	12:06	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	1.67	<1.00	<1.00	<2.00
GPG3	23	37347	08 25 86	10:13	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
GPG3C	5	37347	08 25 86	00:00	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
GPG3	27	37349	09 11 86	07:53	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
GPG3C	[illegible]	37349	09 11 86	07:53	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
GPG3	31	37354	09 12 86	07:38	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
GPG3C	4	37354	09 12 86	07:38	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
GPG3	34	37356	09 08 86	10:43	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
GPG3C	7	37356	09 08 86	10:43	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
GPG3	35	37357	09 11 86	10:47	<12.9	<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	11.0	<0.610	<1.70	<2.40
GPG3C	8	37357	09 11 86	10:47	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
T4W2	4	04014	08 26 86	08:04		<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4WC2	5	04014	08 26 86	08:04	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
T4W2	6	04021	08 25 86	10:18		<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4WC2	6	04021	08 25 86	10:18	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	1.84	<1.00	<1.00	<2.00
T4W2	8	04027	08 26 86	11:59		<1.34	<1.21	<1.26	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T4WC2	7	04027	08 26 86	11:59	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00

TASK 44 GC/MS CONFIRMATION DATA

FIELD GROUP NUMBER T44GM53 IS GC/MS RESULTS

STORET NO. / METHOD / PARAMETER / UNITS	[illegible] SBB DIMP UG/L	34386 SB HCCPD UG/L	39330 SB ALDRIN UG/L	39430 SB ISODRIN UG/L	39320 SB P,P'-DDE UG/L	39380 SB DIELDRIN UG/L	39390 SB ENDRIN UG/L	39300 SB P,P'-DDT UG/L	81560 UP DMDS UG/L	55564 UP 1,4-OXAT UG/L	98[illegible] UP 1,4-DITH UG/L	98[illegible] UP CPMS UG/L	81512 UP BTZ UG/L	9[illegible] UP CPMSO UG/L
FIELD ID # SAMPLE ID DATE TIME														
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	[illegible]	<0.060	<0.054	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	[illegible]	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	0.240	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	1.50	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	1600	<0.415	<0.315	<0.260	<0.240	1.49	0.512	<0.295	<1.16	2.92	10.8	<1.08	<1.14	<1.98
[illegible]	940	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	9.09	48.2	24.6		<17.0
[illegible]	4.0	<0.083	<0.083	<0.056	<0.046	[illegible]	0.421	<0.059	8.47	13.1	55.0	30.1	1.41	12.7
[illegible]	2.0	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	NA	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	NA	NA	NA	NA	NA	NA	NA	NA	27.5	NA	NA	NA		NA
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	1.68	<1.08	<1.14	<1.98
[illegible]	[illegible]	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.48
[illegible]	[illegible]	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	2.0	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.96
[illegible]	[illegible]	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	[illegible]	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	[illegible]	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	[illegible]	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	[illegible]	[illegible]	[illegible]	<0.056	<0.046	1.14	[illegible]	[illegible]	<1.16	[illegible]	6.45	22.9	<1.14	92.6
[illegible]	[illegible]	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	[illegible]		49.5
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	[illegible]	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	[illegible]	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	NA	<6.10	<11.0	<14.0		<17.0
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	<11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	<6.10	<11.0	<14.0		<17.0
[illegible]	<11	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	<1.35	<1.59	<1.08	<1.14	<1.98
[illegible]	3600	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	14.7	160	<14.0		<17.0
[illegible]	5400	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	16.9	193	1.25	3.56	<1.98
[illegible]	1400	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	10.0	<2.50	<6.10	<11.0	<14.0		<17.0
[illegible]	5400	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	44.6	346	<14.0		<17.0
[illegible]	12000	<2.00	<2.00	<1.40	<1.15	[illegible]	<1.50	<1.48	<1.16	66.6	498	<1.08	5.27	<1.98
[illegible]	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<3.00	1230	1060	<14.0		<17.0
[illegible]	13	<0.083	<0.083	<0.056	<0.046	<0.055	<0.060	<0.059	<1.16	1170	1110	9.46	14.6	<1.98

STORET CODE:				81596	34030	34010	34371	98553	98554	34423	34501	34496	34546	32106	34531	34506	32102
METHOD CODE:				RB	WB	WB	WB	WB	WB	YB	YB	YB	YB	YB	YB	YB	YB
PARAMETER:				MIBK	BENZENE	TOLUEN	ETHYLBENZ	M-XYL	O&P-XYL	METHYLCL	11DCE	11DCLE	T12DCE	CHCL3	12DCLE	111TCE	CCL4
UNITS:				UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
LOC GRP	#	SAMPLE ID	DATE TIME														
[illegible]	1	?1006	05 05 87 10:13	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	6.57	<1.00	<1.00	<2.00
[illegible]	1	?1008	05 05 87 10:1?	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	4.29	<0.610	<1.70	<2.40
[illegible]	1	?1008	06 02 87 08:51	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	6.93	<0.610	<1.70	<2.40
[illegible]	?	?2006	05 05 87 13:19	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	2	?2006	05 05 87 14:19	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	?	?2006	06 02 87 08:58	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	3	?2006	05 0? 87 07:36	<2.00	3.40	7.23	20.6	62.3	67.4	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	9	?2006	05 0? 87 07:36	<12.9	3.05	5.20	13.7	45.1	53.4	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	4	?9002	05 05 87 14:16	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	12	?9002	06 0? 87 09:55	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	10?	?9002	05 05 87 14:16	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	5	2205?	05 1? 87 07:52	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	1.66	<1.00	<1.00	<1.50
[illegible]	5	23004	05 13 87 10:08	<12.9	<134	<121	<128	<135	<247	<500	<110	<120	<120	7330	<61.0	<170	<240
[illegible]	6	23004	05 13 87 10:08	<2.00	10.3	<1.00	<1.00	<1.00	<2.00	34.?		<2.00	<1.20	>160	54.3	<1.00	<1.50
[illegible]	6	2?029	05 13 87 11:44	<12.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
[illegible]	7	2?029	05 13 87 11:44	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
[illegible]	11	23189	05 14 87 08:36	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	8	23189	05 14 87 08:36	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	1.11	<1.00	<1.00	<1.50
[illegible]	?	23193	05 14 87 08:28	<2.00	?.46	<1.00	<1.00	<1.00	2.50	<4.60		<2.00	<1.20	<1.00	<1.00	<1.00	<1.50
[illegible]	9	23193	05 14 87 08:28	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	15	?4092	05 18 87 08:42	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	10	24092	05 1? 87 08:42	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	<1.00	<1.00	<1.00	<1.50
[illegible]	?	24106	05 1? 87 13:35	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	11	24106	05 1? 87 13:35	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	<1.00	<1.00	<1.00	<1.50
[illegible]	1?	24111	05 14 87 13:55	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	1.58	<0.610	<1.70	<2.40
[illegible]	12	24111	05 14 87 13:55	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	1.21	<1.00	<1.00	<1.50
[illegible]	?9	2411?	05 1? 87 10:46	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	13	24117	05 1? 87 10:46	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	<1.00	<1.00	<1.00	<1.50
[illegible]	20	24120	05 19 87 13:43	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	14	24120	05 19 87 13:43	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	<1.00	<1.00	<1.00	<1.50
[illegible]	2?	24127	05 12 87 14:44	<12.9	2.15	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	104	4.25	<1.70	<2.40
[illegible]	15	24127	05 12 87 14:44	<2.00	2.99	<1.00	<1.00	<1.00	<2.00	7.2?		<2.00	<1.20	139	6.12	<1.00	<1.50
[illegible]	24	27049	05 12 87 15:12	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	19.4	<0.610	<1.70	<2.40
[illegible]	17	27049	05 12 87 15:12	<2.00	1.13	<1.00	<1.00	<1.00	<2.00	<4.6?		<2.00	<1.20	26.3	<1.00	<1.00	<1.50
[illegible]	64	27055	05 08 87 09:15	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	19	27055	05 08 87 09:15	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	<1.00	<1.00	<1.00	<1.50
[illegible]	25	27074	05 13 87 09:47	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	27.0	<0.610	<1.70	<2.40
[illegible]	2?	27074	05 13 87 09:47	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
[illegible]	21	33202	05 05 87 08:21	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	17	33202	06 02 87 14:41	<12.9	6.23	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	105	33202	05 05 87 08:21	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	22	33263	05 06 87 14:24	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	1.38	<1.00	<1.00	<2.00
[illegible]	32	33263	05 06 87 14:24	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	23	35016	05 06 87 15:16	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	<2.00	<1.00	<1.00	<1.00	<2.00
[illegible]	2?	?5016	05 06 87 15:16	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
[illegible]	25	?5066	05 12 87 0?:47	<2.00	2.80	<1.00	<1.00	<1.00	<2.00	<4.90		<2.00	<1.20	2.34	<1.00	<1.00	<1.50
[illegible]	26	?5084	05 12 87 1?:20	<2.00	7.28	<1.00	<1.00	<1.00	<2.00	<4.90		<2.00	74.5	37.1	19.1	<1.00	<1.50
[illegible]	30	?5084	05 12 87 10:20	<12.9	9.47	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	56.7	34.5	11.9	<1.70	<2.40
[illegible]	27	?5090	05 06 87 13:51	<2.00	<1.00	<1.00	<1.00	<1.00	<2.00	<5.00		<2.00	13.6	4.56	>158	<1.00	<2.00
[illegible]	31	?5090	05 06 87 13:51	<12.9	<1.34	<1.21	2.84	<1.35	<2.47	<5.00	<1.10	<1.20	14.9	3.99	265	<1.70	<2.40

METHOD CODE					Y8	Y8	Y8
PARAMETER:					112TCE	TCLEE	CLC6H5
UNITS:					UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME			
T440MS3	1	01006	05 05 87	10:13	<1.00	<1.00	<2.00
T44IS3	1	01006	05 05 87	10:13	<1.00	<1.30	<0.580
T44FR3	1	01006	06 02 87	08:51	<1.00	<1.30	<0.580
T44WW3	[illegible]	02008	05 05 87	13:19	<1.00	<1.30	<0.580
T440MS3	2	02008	05 05 87	13:19	<1.00	<1.00	<2.00
T44FR3	3	02008	06 02 87	08:58	<1.00	<1.30	<0.580
T440MS3	3	04009	05 05 87	07:36	<1.00	<1.00	<2.00
T44WW3	9	04009	05 05 87	07:36	<1.00	<1.30	<0.580
T440MS3	4	09002	05 05 87	14:16	<1.00	1.65	<2.00
T44FR3	17	09002	06 03 87	09:55	<1.00	1.59	<0.580
T44WW3	106	09002	05 05 87	14:16	<1.00	1.93	<0.580
T440MS3	5	22051	05 13 87	07:52	<1.00	<1.00	<2.10
T4425-3	5	23004	05 13 87	10:08	<100	<130	<58.0
T440MS3	6	23004	05 13 87	10:08	<1.00	36.9	<2.10
T4425-3	6	23029	05 13 87	11:44	NA	NA	NA
T440MS3	7	23029	05 13 87	11:44	NA	NA	NA
T4425-3	11	23189	05 14 87	08:36	<1.00	<1.30	<0.580
T440MS3	8	23189	05 14 87	08:36	<1.00	<1.00	<2.10
T440MS3	9	23193	05 14 87	08:28	<1.00	<1.00	<2.10
T44IS3	9	23193	05 14 87	08:28	<1.00	<1.30	<0.580
T4425-3	15	24092	05 18 87	08:42	<1.00	<1.30	<0.580
T440MS3	10	24092	05 18 87	08:42	<1.00	<1.00	<2.10
T4425-3	16	24106	05 18 87	13:35	<1.00	<1.30	<0.580
T440MS3	11	24106	05 18 87	13:35	<1.00	<1.00	<2.10
T4425-3	18	24111	05 14 87	13:55	<1.00	<1.30	<0.580
T440MS3	12	24111	05 14 87	13:55	<1.00	<1.00	<2.10
T4425-3	19	24113	05 18 87	10:46	<1.00	<1.30	<0.580
T440MS3	13	24113	05 18 87	10:46	<1.00	<1.00	<2.10
T4425-3	20	24120	05 19 87	13:43	<1.00	<1.30	<0.580
T440MS3	14	24120	05 19 87	13:43	<1.00	<1.00	<2.10
T4425-3	22	24127	05 12 87	14:33	<1.00	70.1	<0.580
T440MS3	15	24127	05 12 87	14:33	<1.00	84.6	<2.10
T4425-3	24	27049	05 12 87	15:12	<1.00	<1.30	<0.580
T440MS3	17	27049	05 12 87	15:12	<1.00	<1.00	<2.10
T44WW3	64	27055	05 06 87	09:15	<1.00	<1.30	<0.580
T440MS3	19	27055	05 06 87	09:15	<1.00	<1.00	<2.10
T4425-3	25	27074	05 13 87	09:47	<1.00	<1.30	<0.580
T440MS3	20	27074	05 13 87	09:47	NA	NA	NA
T440MS3	21	33002	05 05 87	08:21	<1.00	<1.00	<2.00
T44FR3	17	33002	06 02 87	14:41	<1.00	<1.30	32.7
T44WW3	108	33002	05 05 87	08:21	<1.00	<1.30	<0.580
T440MS3	22	33063	05 06 87	14:24	<1.00	<1.00	<2.00
T44WW3	32	33063	05 06 87	14:24	<1.00	<1.30	<0.580
T440MS3	23	35016	05 06 87	15:16	<1.00	<1.00	6.00
T44IS3	23	35016	05 06 87	15:16	<1.00	<1.30	19.5
T440MS3	25	35066	05 12 87	07:47	<1.00	<1.00	<2.10
T440MS3	26	36084	05 12 87	10:20	21.0	7.51	5.30
T44IS3	30	36084	05 12 87	10:20	36.8	8.76	4.71
T440MS3	27	36098	05 06 87	13:51	2.43	18.9	39.5
T44IS3	31	36098	05 06 87	13:51	4.47	23.6	55.9

METHOD CODE:					QB	BBB	MB	RB	BBB	MB
PARAMETER:					DBCP	DBCP	DBCP	DCPD	DCPD	DCPD
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME						
T440MS3	1	01008	05/05/87	10:13		<15	<4.0		<4.7	<2.0
T441S3	1	01008	05/05/87	10:13	<0.130			<9.31		
T44RR3	1	01008	06/02/87	08:51	<0.130			<9.31		
T44WW3	2	02008	05/05/87	13:19	<0.130			<9.31		
T440MS3	2	02008	05/05/87	13:19		<15	<4.0		<4.7	<2.0
T44RR3	3	02008	06/02/87	08:58	<0.130			<9.31		
T440MS3	3	04009	05/06/87	07:36		<15	<4.0		<4.7	<2.0
T44WW3	9	04009	05/06/87	07:36	<0.130			<9.31		
T440MS3	4	09002	05/05/87	14:16		<15	<4.0		<4.7	<2.0
T44RR3	12	09002	06/03/87	09:55	<0.130			<9.31		
T44WW3	106	09002	05/05/87	14:16	<0.130			<9.31		
T440MS3	5	22051	05/13/87	07:52		<15	<3.8		<4.7	<1.1
T4425-3	5	23004	05/13/87	10:08	1.42			414		
T440MS3	6	23004	05/13/87	10:08		<15	<3.8		720	>170
T4425-3	6	23029	05/13/87	11:44	<0.130			<9.31		
T440MS3	7	23029	05/13/87	11:44		<15	NA		<4.7	NA
T4425-3	11	23189	05/14/87	08:36	<0.130			<9.31		
T440MS3	8	23189	05/14/87	08:36		<15	<3.8		<4.7	2.0
T440MS3	9	23193	05/14/87	08:28		NA	<3.8		NA	<1.1
T441S3	9	23193	05/14/87	08:28	<0.130			<9.31		
T4425-3	15	24092	05/18/87	08:42	<0.130			<9.31		
T440MS3	10	24092	05/18/87	08:42		<15	<3.8		<4.7	<1.1
T4425-3	16	24106	05/18/87	13:35	<0.130			<9.31		
T440MS3	11	24106	05/18/87	13:35		<15	<3.8		<4.7	<1.1
T4425-3	18	24111	05/14/87	13:55	<0.130			<9.31		
T440MS3	12	24111	05/14/87	13:55		<15	<3.8		<4.7	<1.1
T4425-3	19	24113	05/18/87	10:46	<0.130			<9.31		
T440MS3	13	24113	05/18/87	10:46		<15	<3.8		<4.7	<1.1
T4425-3	20	24120	05/19/87	13:43	<0.130			<21.6		
T440MS3	14	24120	05/19/87	13:43		<15	<3.8		<4.7	<1.1
T4425-3	22	24127	05/12/87	14:33	3.64			169		
T440MS3	15	24127	05/12/87	14:43		<15	<3.8		190	>170
T4425-3	24	27049	05/12/87	15:12	<0.130			<9.31		
T440MS3	17	27049	05/12/87	15:12		<15	<3.8		<4.7	1.2
T44CW3	64	27055	05/08/87	09:15	<0.130			<9.31		
T440MS3	19	27055	05/08/87	09:15		<15	<3.8		<4.7	<1.1
T4425-3	25	27074	05/13/87	09:47	<0.130			<9.31		
T440MS3	20	27074	05/13/87	09:47		<15	NA		<4.7	NA
T440MS3	21	33002	05/05/87	08:21		<15	<4.0		<4.7	<2.0
T44RR3	17	33002	06/02/87	14:41	<0.130			<9.31		
T44WW3	109	33002	05/05/87	08:21	<0.130			<9.31		
T440MS3	22	33063	05/06/87	14:24		<15	<4.0		<4.7	<2.0
T44WW3	32	33063	05/06/87	14:24	3.21			<9.31		
T440MS3	23	35016	05/06/87	15:16		<15	<4.0		<4.7	<2.0
T441S3	23	35016	05/06/87	15:16	<0.130			<9.31		
T440MS3	25	35066	05/12/87	07:47		<15	<3.8		<4.7	<1.1
T440MS3	26	36084	05/12/87	10:20		<15	<3.8		<4.7	<1.1
T441S3	30	36084	05/12/87	10:20	<0.130			<9.31		
T440MS3	27	36090	05/06/87	13:51		<15	<4.0		<4.7	<2.0
T441S3	31	36090	05/06/87	13:51	<0.130			<9.31		

METHOD CODE: PARAMETER: UNITS: FLD.OFF.	#	SAMPLE ID	DATE	TIME	BB8 DIMP UG/L	S8 HCCPD UG/L	S8 ALDRIN UG/L	S8 ISODRIN UG/L	S8 P,P'-DDE UG/L	S8 DIELDRIN UG/L	S8 ENDRIN UG/L	S8 P,P'-DDT UG/L	U8 DMDS UG/L	U8 1,4-OXAT UG/L	U8 1,4-DITH UG/L	U8 CPMS UG/L	U8 BTZ UG/L	U8 CPMSO UG/L
T44.W3	92	36110	05 11 87	15:42	<11	<0.083	<0.083	<0.056	<0.046	>0.050	<0.260	<0.054	<1.16	<1.35	<1.59	<1.08	<1.14	<1.99
T44.MS3	28	36110	05 11 87	15:42	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
T44.W3	97	36139	05 11 87	14:39	420	<0.415	<0.415	<0.280	<0.230	<0.275	<0.300	<0.295	<1.16	58.9	302	3.79	6.79	<1.96
T44.MS3	29	36139	05 11 87	14:39	170	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	44.9	241	<14.0		<17.0
T44.MS3	41	37309	07 08 87	08:56	500	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		15.7
T44.OP3	4	37309	06 16 87	09:45	830	<0.700	<0.700	<0.600	<0.530	<0.600	<0.520	<0.700	<1.80	<2.00	6.46	<1.30	<2.00	27.1
T44.MS3	42	37332	07 06 87	06:05	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
T44.OP3	9	37332	06 18 87	08:29	<11	<0.070	<0.070	<0.060	<0.053	0.711	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30	<2.00	<4.20
T44.MS3	43	37333	07 09 87	07:20	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
T44.OP3	10	37333	06 19 87	09:39	<11	<0.070	<0.070	<0.060	<0.053	0.205	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30	<2.00	<4.20
T44.MS3	44	37344	07 06 87	11:15	560	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		53.8
T44.MS3	45	37359	07 06 87	09:45	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0
T44.OP3	33	37359	06 17 87	10:25	<11	<0.070	<0.070	<0.060	<0.053	<0.060	<0.052	<0.070	<1.80	<2.00	<1.10	<1.30	<2.00	<4.20
T44.MS3	46	CIII	07 08 87	09:55	<5.7	<11.0	<4.70	<5.90	<4.70	<4.70	<7.60	<10.0	<2.50	<6.10	<11.0	<14.0		<17.0

METHOD CODE:					R8	W8	W8	W8	W8	W8	Y8	Y8	Y8	Y8	Y8	Y9	Y8	Y8
PARAMETER:					MIBK	BENZENE	TOLUEN	ETHYLBENZ	M-XYL	O&P-XYL	METHYLCL	11DCE	11DCLE	T12DCE	CHCL3	12DCLE	111TCE	CCL4
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME														
T440W3	92	36110	05 11 87	15:42	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	91.6	2.61	<1.70	<2.40
T440MS3	[illegible]	36110	05 11 87	15:42	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.80		<2.00	<1.20	<1.00	<1.00	<1.00	<1.50
T440W3	9	36139	05 11 87	14:39	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	25.4	20.4	<1.70	<2.40
T440MS3	29	36139	05 11 87	14:39	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.80		<2.00	<1.20	4.28	27.6	<1.00	<1.50
T440MS3	41	37309	07 08 87	08:56	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.80		<2.00	<1.20	<1.00	6.25	<1.00	<1.50
T440P3	4	37309	06 16 87	09:45	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	6.27	<1.70	<2.40
T440MS3	42	37332	07 08 87	08:05	<2.00	1.75	<1.00	<1.00	<1.00	<2.00	<4.80		<2.00	<1.20	2.76	<1.00	<1.00	<1.50
T440P3	9	37332	06 18 87	08:29	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	<1.40	<0.610	<1.70	<2.40
T440MS3	43	37333	07 09 87	07:20	<2.00	48.0	<1.00	<1.00	<1.00	<2.00	<4.80		<2.00	<1.20	16.7	<1.00	<1.00	<1.50
T440P3	10	37333	06 18 87	09:39	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	<1.20	<1.20	13.5	<0.610	<1.70	<2.40
T440MS3	44	37344	07 08 87	11:15	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.60		<2.00	<1.20	>160	3.93	<1.00	9.30
T440MS3	45	37359	07 08 87	09:45	<2.00	2.89	<1.00	<1.00	<1.00	<2.00	<4.80		2.58	<1.20	<1.00	<1.00	2.86	<1.50
T440P3	33	37359	06 17 87	10:25	<12.9	<1.34	<1.21	<1.28	<1.35	<2.47	<5.00	<1.10	2.31	1.26	<1.40	<0.610	3.70	<2.40
T440MS3	46	C111	07 08 87	09:55	<2.00	<1.10	<1.00	<1.00	<1.00	<2.00	<4.80		<2.00	<1.20	<1.00	<1.00	1.08	<1.50

METHOD CODE:					Y8	Y8	Y8
PARAMETER:					112TCE	TCLEE	CLC6H5
UNITS:					UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME			
T44CW3	92	36110	05/11/87	15:42	<1.00	<1.30	<0.580
T44GMS3	26	36110	05/11/87	15:42	<1.00	<1.00	<2.10
T44CW3	93	36139	05/11/87	14:39	<1.00	<1.30	<0.560
T44GMS4	29	36139	05/11/87	14:39	<1.00	<1.00	<2.10
T44GMS4	41	37309	07/08/87	08:56	<1.00	73.5	<2.10
T44OP3	4	37309	06/16/87	09:45	<1.00	45.4	<0.580
T44GMS4	42	37332	07/08/87	08:05	<1.00	<1.00	6.64
T44OP3	9	37332	06/16/87	08:29	<1.00	<1.30	<0.580
T44GMS4	43	37333	07/09/87	07:20	<1.00	<1.00	<2.10
T44OP3	10	37333	06/18/87	09:39	<1.00	<1.30	<0.560
T44GMS4	44	37344	07/08/87	11:15	<1.00	116	3.89
T44GMS4	45	37359	07/08/87	09:45	<1.00	3.17	10.8
T44OP3	33	37359	06/17/87	10:25	<1.00	3.95	<0.580
T44GMS4	46	C111	07/08/87	09:55	<1.00	1.74	<2.10

PARAMETER:					DBCP	DBCP	DBCP	DCPD	DCPD	DCPD
UNITS:					UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
FLD.GRP.	#	SAMPLE ID	DATE	TIME						
T44GW3	92	36110	05/11/87	15:42	<0.130			<9.31		
T44GMS3	28	36110	05/11/87	15:42		<15	<3.8		<4.7	<1.1
T44GW3	97	36139	05/11/87	14:39	<0.130			<9.31		
T44GMS3	29	36139	05/11/87	14:39		<15	<3.8		<4.7	<1.1
T44GMS3	41	37309	07/08/87	08:56		<15	<3.8		840	>170
T44GP3	4	37309	06/16/87	09:45	0.176			475		
T44GMS3	42	37332	07/08/87	08:05		<15	<3.8		<4.7	<1.1
T44GP3	9	37332	06/18/87	08:29	<0.130			<9.31		
T44GMS3	43	37333	07/09/87	07:20		<15	<3.8		<4.7	<1.1
T44GP3	10	37333	06/18/87	09:39	<0.130			<9.31		
T44GMS3	44	37344	07/08/87	11:15		<15	12		<4.7	43
T44GMS3	45	37359	07/08/87	09:45		<15	<3.8		<4.7	1.8
T44GP3	33	37359	06/17/87	10:25	<0.130			<9.31		
T44GMS3	46	C111	07/08/87	09:55		<15	<3.8		<4.7	<1.1

TASK 4

ANALYTICAL RESULTS FOR NONTARGET COMPOUNDS
IDENTIFIED BY GC/MS ANALYSIS

ENVIRONMENTAL SCIENCE & ENGINEERING 01/06/88

RESULTS FOR NON-TARGET COMPOUNDS AT STATION
37309

:E SAMPLE * SEQUENCE NUMBER: T44GMS3
41

)LLECTION DATE: 07/08/87
)LLECTION TIME: 08:56

.SATHAMA TEST NAME		ESE STORET	CONC.	IDENTIFICATION
'K563	UG/L	91563 0	21.9	UNKNOWN, ALICYCLIC CMPD.
'K566	UG/L	91566 0	72.7	UNKNOWN, ALICYCLIC CMPD.
'K569	UG/L	91569 0	18.1	UNKNOWN
'K573	UG/L	91573 0	9.11	UNKNOWN, ALICYCLIC CMPD.
K577	UG/L	91577 0	13.3	UNKNOWN
K582	UG/L	91582 0	16.9	UNKNOWN
K587	UG/L	91587 0	16.5	UNKNOWN
K589	UG/L	91589 0	28.2	UNKNOWN
K595	UG/L	91595 0	13.7	UNKNOWN
K625	UG/L	91625 0	13.8	UNKNOWN
K575	UG/L	91575 0	16.1	UNKNOWN
K579	UG/L	91579 0	79.0	UNKNOWN
K580	UG/L	91580 0	20	UNKNOWN
K581	UG/L	91581 0	10.4	UNKNOWN
K583	UG/L	91583 0	30.0	UNKNOWN
K585	UG/L	91585 0	80	UNKNOWN, ALICYCLIC CMPD.
K586	UG/L	91586 0	54.4	UNKNOWN
K593	UG/L	91593 0	24.5	UNKNOWN
K594	UG/L	91594 0	31.5	UNKNOWN
K623	UG/L	91623 0	7.90	c12h9cl5o 2,5,7-METHENO-3H-CYCLOPENTA-[A]PENTALEN-3-ONE
K633	UG/L	91633 0	40.4	PENTACHLORO CMPD, POSS.M.WT.360
K519		91519	23.1	TETRACHLOROETHENE

	UG/L	0		
UNK543		91543	11.2	DCPD ISOMER
	UG/L	0		

ENVIRONMENTAL SCIENCE & ENGINEERING 01/06/88

RESULTS FOR NON-TARGET COMPOUNDS AT STATION
37332

ESE SAMPLE • SEQUENCE NUMBER T44GM53
42

COLLECTION DATE: 07/08/87
COLLECTION TIME: 08:05

UASATHAMA TEST NAME		ESE STORET	CONC.	IDENTIFICATION
UNK523		91523	8.80	CHLOROBENZENE
	UG/L	0		
UNK582		91582	10.3	UNKNOWN
	UG/L	0		

ENVIRONMENTAL SCIENCE & ENGINEERING 01/06/88

RESULTS FOR NON-TARGET COMPOUNDS AT STATION
37333

ESE SAMPLE * SEQUENCE NUMBER: T44GMS3
43

COLLECTION DATE: 07/09/87
COLLECTION TIME: 07:20

UASATHAMA TEST NAME	ESE STORET	CONC.	IDENTIFICATION
UNK642 UG/L	91642 0	37.8	UNKNOWN

ENVIRONMENTAL SCIENCE & ENGINEERING 01/06/88

RESULTS FOR NON-TARGET COMPOUNDS AT STATION
37344

ESE SAMPLE • SEQUENCE NUMBER: T44GMS3
44

COLLECTION DATE: 07/08/87
COLLECTION TIME: 11:15

UASATHAMA TEST NAME		ESE STORET	CONC.	IDENTIFICATION
UNK523		91523	2.90	CHLOROBENZENE
	UG/L	0		
UNK582		91582	8.12	UNKNOWN
	UG/L	0		
UNK589		91589	79.2	UNKNOWN
	UG/L	0		
UNK585		91585	7	UNKNOWN
	UG/L	0		
UNK593		91593	13.7	UNKNOWN
	UG/L	0		
UNK519		91519	39.5	TETRACHLOROETHENE
	UG/L	0		

ENVIRONMENTAL SCIENCE & ENGINEERING 01/06/88

RESULTS FOR NON-TARGET COMPOUNDS AT STATION
37359

ESE SAMPLE * SEQUENCE NUMBER: T44GMS3
45

COLLECTION DATE: 07/08/87
COLLECTION TIME: 09:45

UASATHAMA TEST NAME		ESE STORET	CONC.	IDENTIFICATION
UNK523		91523	5.50	CHLOROBENZENE
	UG/L	0		
UNK543		91543	2.48	DICHLOROBENZENE
	UG/L	0		

TASK 44

ANALYTICAL RESULTS FOR NONTARGET COMPOUNDS
IDENTIFIED BY GC/MS ANALYSIS

PARAMETERS UNITS	STORET # METHOD	37305 OPG3C 1	ID
DATE		08/26/86	
TIME		14:56	
UNK563	91563	28.8	UNK
UNK565	91565	154	CAPROLACTAM
UNK582	91582	20.4	UNK
UNK586	91586	8.78	UNK

PARAMETERS UNITS	STORET # METHOD	37307 OPGW2C 2	ID
DATE		06/18/86	
TIME		11:41	
UNK594	91594	26.4	N-HEPTADECANE; 2,10,6,4-TETRA METHYLPENTADECANE
UNK600	91600	7.48	N-OCTADECANE
UNK605	91605	13.0	N-NONADECANE
UNK610	91610	7.40	N-EICOSANE

PARAMETERS UNITS	STORET # METHOD	37308 OPGW2C 3	ID
DATE		06/16/86	
TIME		15:17	
UNK519	91519	20.9	TETRACHLOROETHENE
UNK563	91563	7.43	CYCLOPENTADIENE DERIVATIVE c11l 6
UNK566	91566	18.9	c10h10o, CYCLPENTADIENE
UNK579	91579	33.6	UNK
UNK582	91582	6.61	UNK
UNK583	91583	7.54	UNK
UNK585	91585	27.9	UNK
UNK586	91586	18.7	UNK
UNK589	91589	30.5	UNK
UNK593	91593	14.4	UNK
UNK594	91594	6.78	UNK
UNK595	91595	6.42	UNK
UNK633	91633	8.52	TETRACHLORINATED COMPOUND

		37312		
PARAMETERS	STORET #	OPGW2C		ID
UNITS	METHOD	1		
DATE		06/17/86		
TIME		11:13		
UNK579	91579	6.57	UNK	

PARAMETERS	STORET #	37313	ID
UNITS	METHOD	OPG3C 2	
DATE		08/26/86	
TIME		10:15	
UNK560	91560	7.49	UNK
UNK563	91563	29.0	UNK
UNK565	91565	339	CAPROLACTAM
UNK579	91579	14.4	2-(4-METHYL-2-FURYL)-2-CYCLOPENTEN-1-ONE
UNK582	91582	27.5	UNK
UNK585	91585	11.8	UNK
UNK586	91586	14.6	UNK
UNK588	91588	38.7	PROPANOIC ACID, 2-METHYL-1-(1,1-DIMETHYL ETHYL)-2-METH.L -1,3-PROPANEDIEL ESTER
UNK599	91599	7.87	UNK
UNK642	91642	96.6	UNK
UNK654	91654	911	UNK
UNK671	91671	752	UNK
UNK693	91693	571	UNK

PARAMETERS UNITS	STORET # METHOD	37320 OPG3C 3	ID
DATE		09/22/86	
TIME		12:06	
UNK529	91529	14.1	2-METHYLCYCLOPENTANONE
UNK648	91648	11.3	UNK
UNK652	91652	236	UNK

PARAMETERS		STORET #	37332	
	UNITS	METHOD	OPGW2C	ID
			5	
DATE			06/16/86	
TIME			11:58	
UNK040		91040	7.50	UNK
UNK582		91582	6.41	UNK

PARAMETERS	UNITS	STORET #	37343	ID
		METHOD	OPGW2C	
			6	
DATE			06/13/86	
TIME			08:39	
UNK594		91594	14.3	N-HEPTADECANE, 2,6,10,14-TETRAMETHYLPENTADECANE

ARAMETERS	STORET #	37343 OPGW2C	ID
UNITS	METHOD	6	
ATE		06/13/86	
IME		08:39	
NK600	91600	5.51	2,6,10,14-TETRAMETHYLPENTADECAN
NK605	91605	7.49	N-NONADECANE
NK667	91667	175	UNK

PARAMETERS		37347	
	STORET #	OPG3C	ID
UNITS	METHOD	5	
DATE		08/25/86	
TIME		00:00	

		37349	
PARAMETERS	STORET #	OPG3C	ID
UNITS	METHOD	6	
DATE		09/11/86	
TIME		07:53	

		37353	ID
PARAMETERS	STORET #	OPGW2C	
UNITS	METHOD	8	
DATE		06/12/86	
TIME		11:32	
UNK523	91523	10.8	A NONANE
UNK524	91524	13.0	4-HYDROXYL-4-METHYL-2-PENTANC E
UNK526	91526	20.9	A NONANE
UNK526	91526	20.9	A NONANE
UNK527	91527	32.3	METHYLOCTANE

PARAMETERS	UNITS	STORET #	37353 OPGW2C		ID
		METHOD	8		
DATE			06/12/86		
TIME			11:32		
UNK649		91649	120	UNK	
UNK657		91657	67.7	UNK	

PARAMETERS		STORET #	37353 OPG3C	ID
	UNITS	METHOD	4	
DATE			09/12/86	
TIME			07:38	

PARAMETERS	UNITS	STORET #	37354 OPGW2C	ID
		METHOD	4	
DATE			06/11/86	
TIME			10:06	
UNK635		91635	2.83	BIS(2-ETHYLHEXYL)PHTHALATE

PARAMETERS	UNITS	STORET #	METHOD	37356 OPG3C 7	ID
DATE				09/08/86	
TIME				10:43	
UNK652		91652		127	UNK

PARAMETERS	STORET #	37357	ID
UNITS	METHOD	OPG3C	
		8	
DATE		09/11/86	
TIME		10:47	

PARAMETERS UNITS	STORET # METHOD	BOLLER OPGW2C 7	ID
DATE		07/01/86	
TIME		09:32	
UNK588	91588	11.4	UNK
UNK635	91635	18.4	PHTHALATE, BIS(2-ETHYLHEXYL)-PHTHALATE
UNK640	91640	5.79	PHTHALATE
UNK649	91649	7.08	PHTHALATE
UNK654	91654	6.42	PHTHALATE
UNK656	91656	112	UNK
UNK669	91669	5.87	PHTHALATE

APPENDIX G
CONTAMINANT TRANSPORT MODEL RESULTS

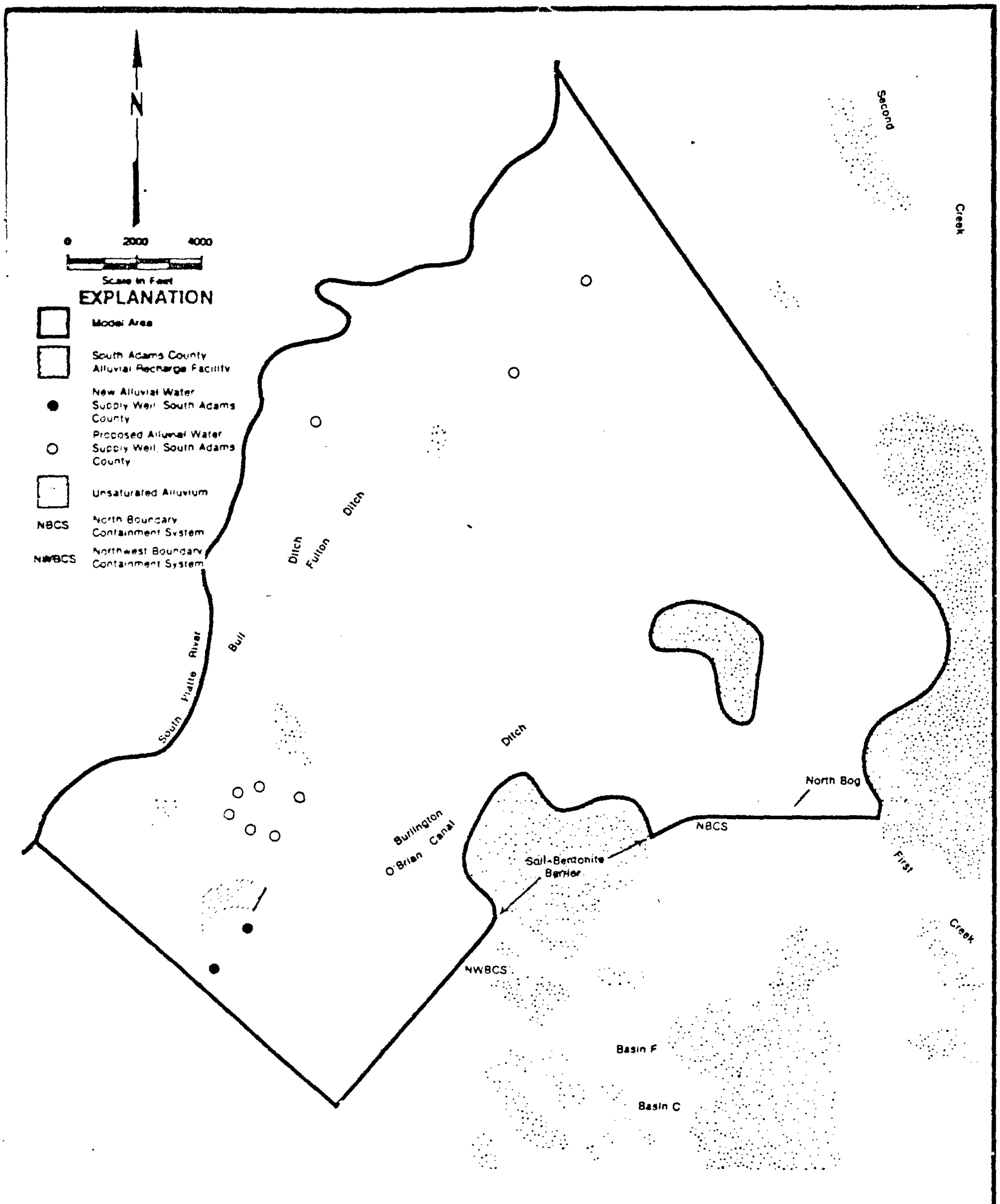


Figure G-1
MODEL AREA IN THE OFFPOST OPERABLE UNIT, ROCKY MOUNTAIN ARSENAL

SOURCE: WARNER, 1983

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

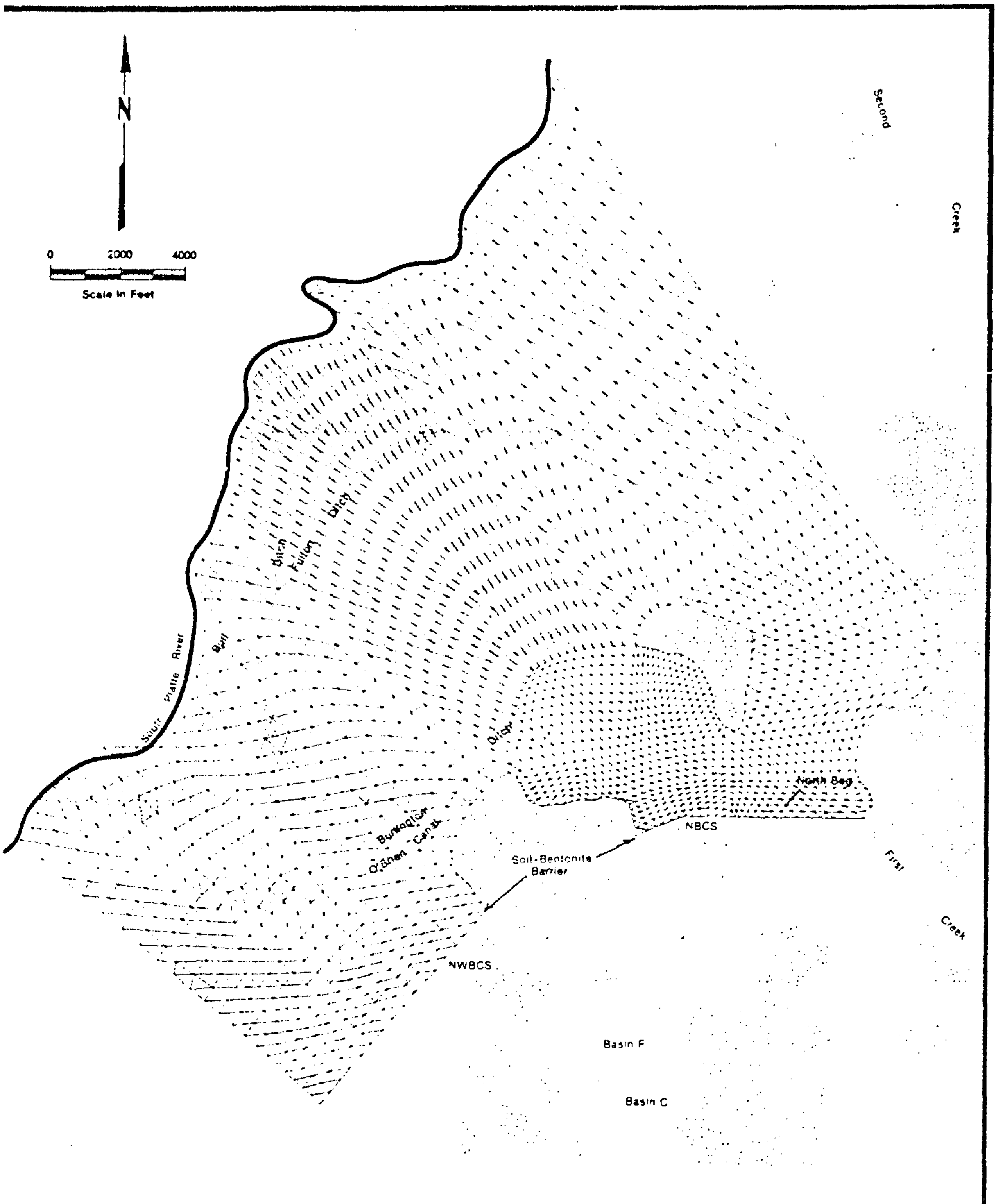


Figure G-2

FINITE ELEMENT MESH
SOURCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

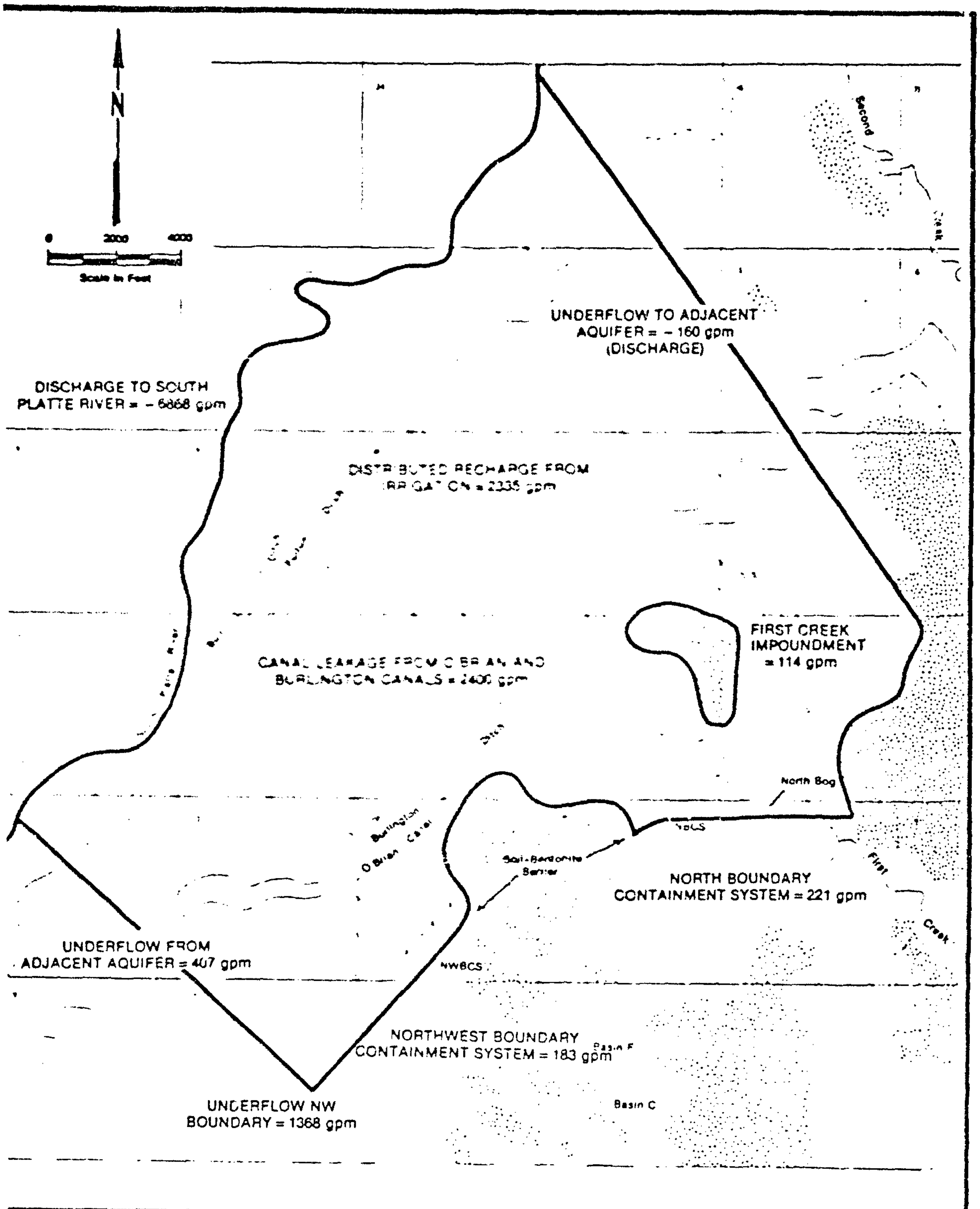


Figure G-3
WATER BALANCE OF MODEL AREA

SOURCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

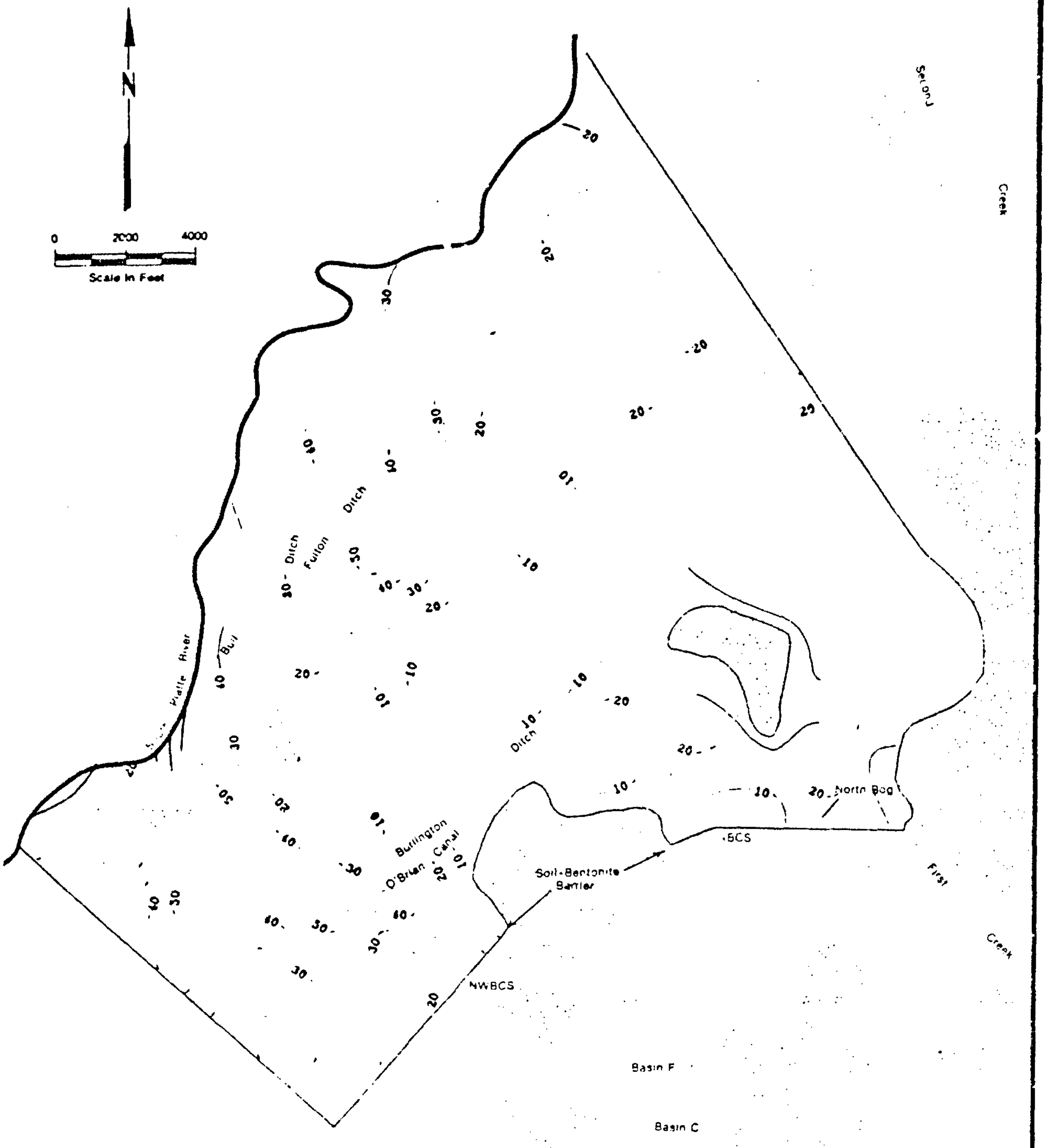
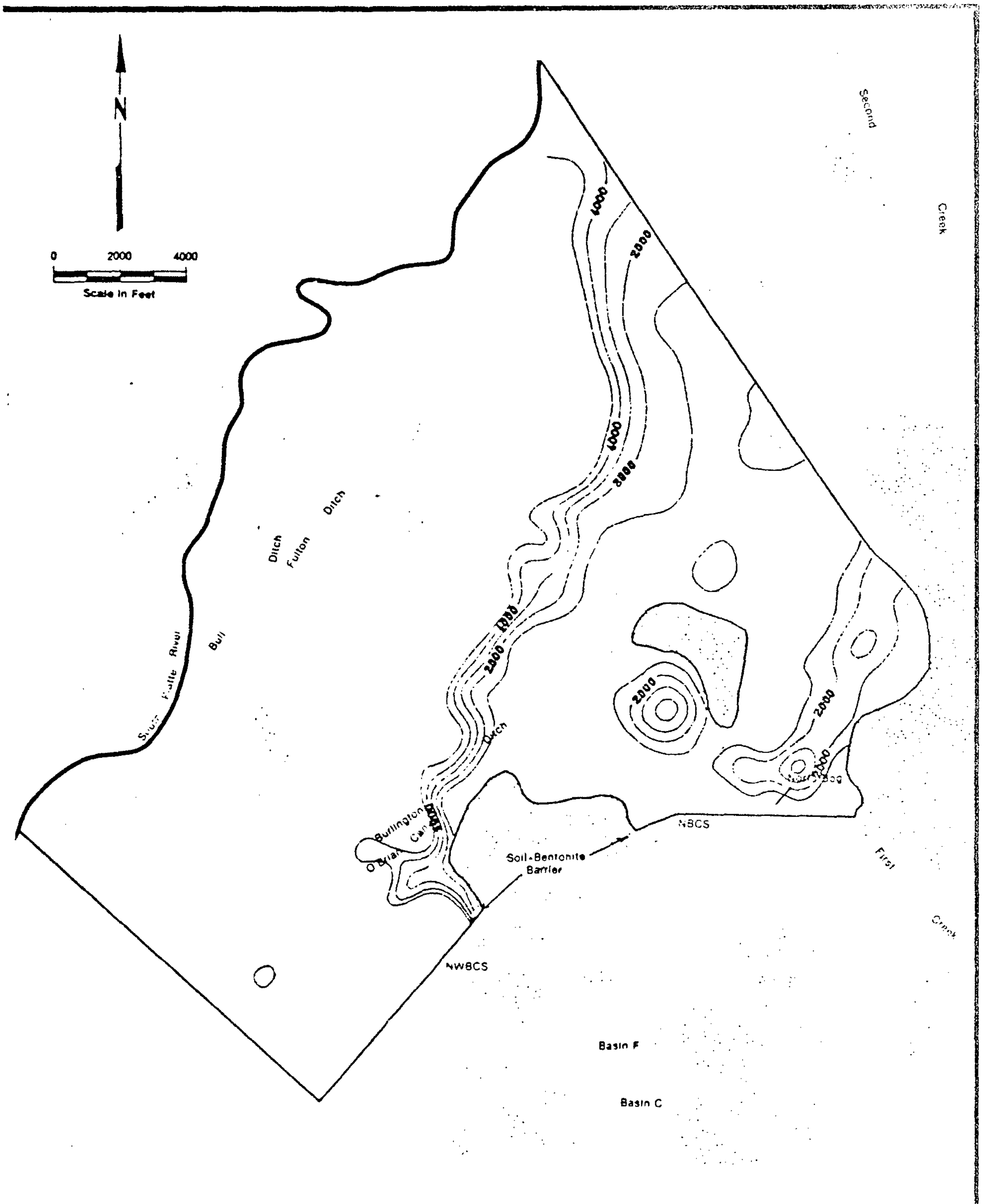


Figure G-4

AQUIFER THICKNESS MAP (FEET)

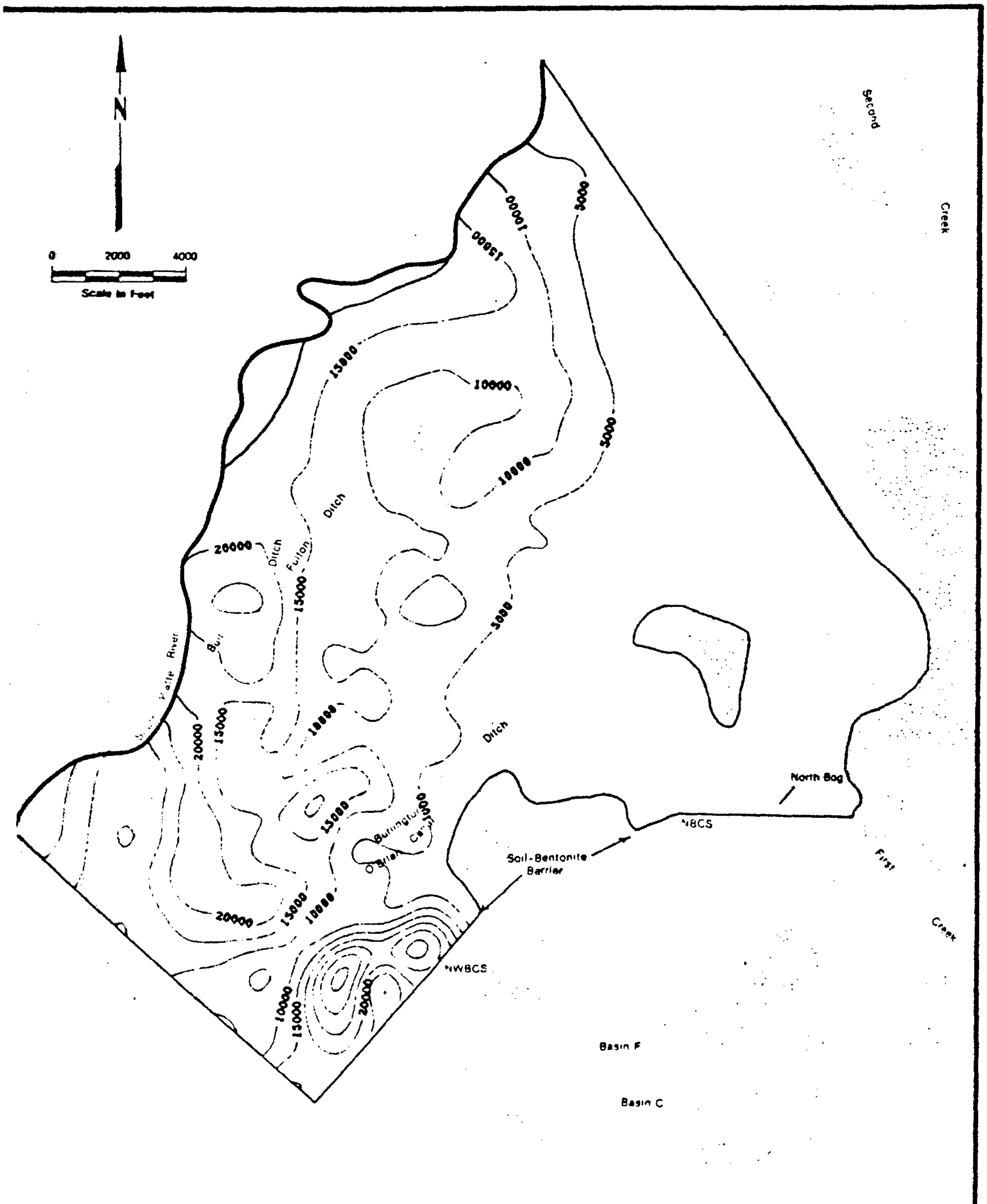
SOURCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



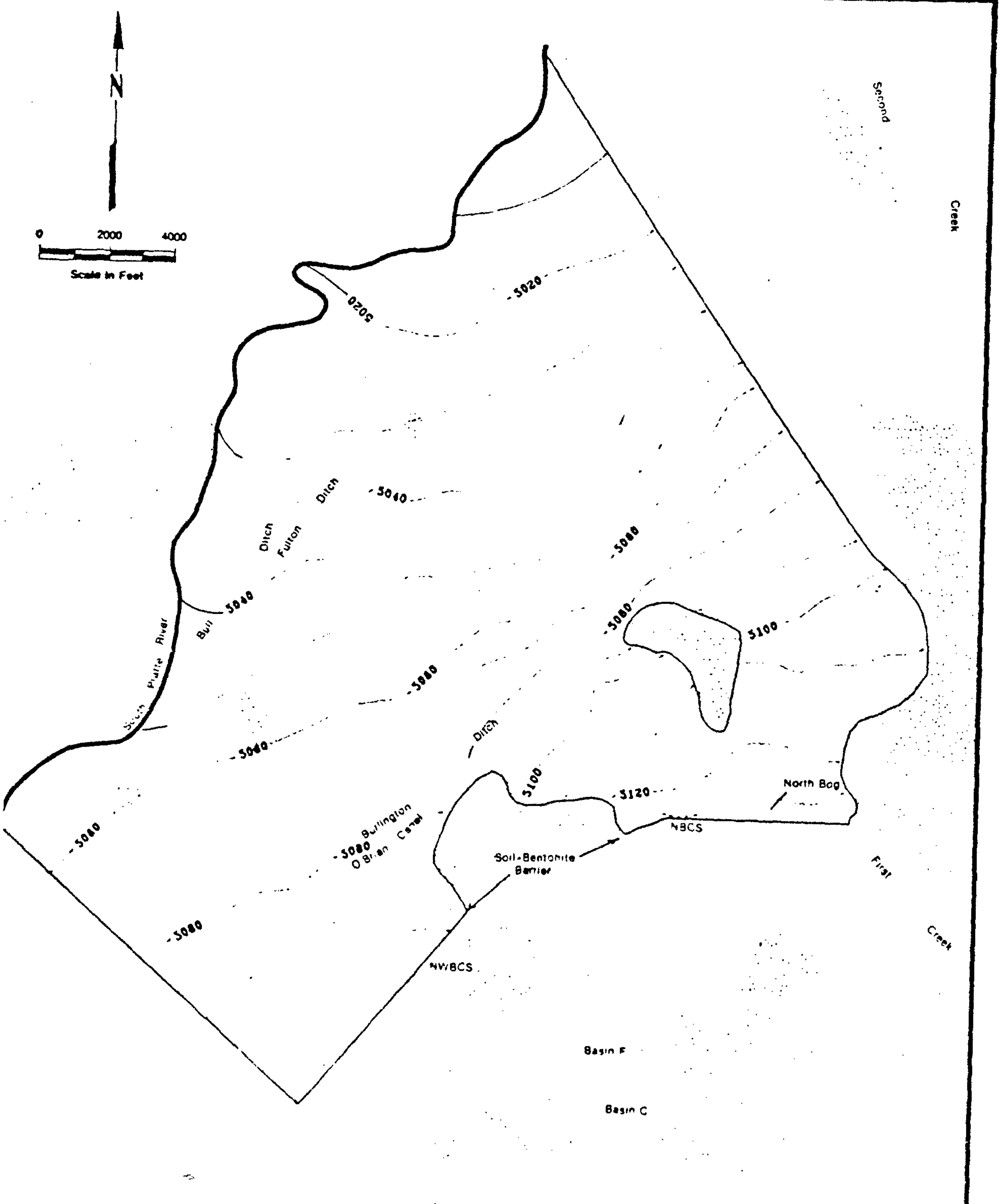
gure G-5a
ANSMISSIVITY MAP,
NTOUR INTERVAL (1,000–5,000 ft^2/day)
JRCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



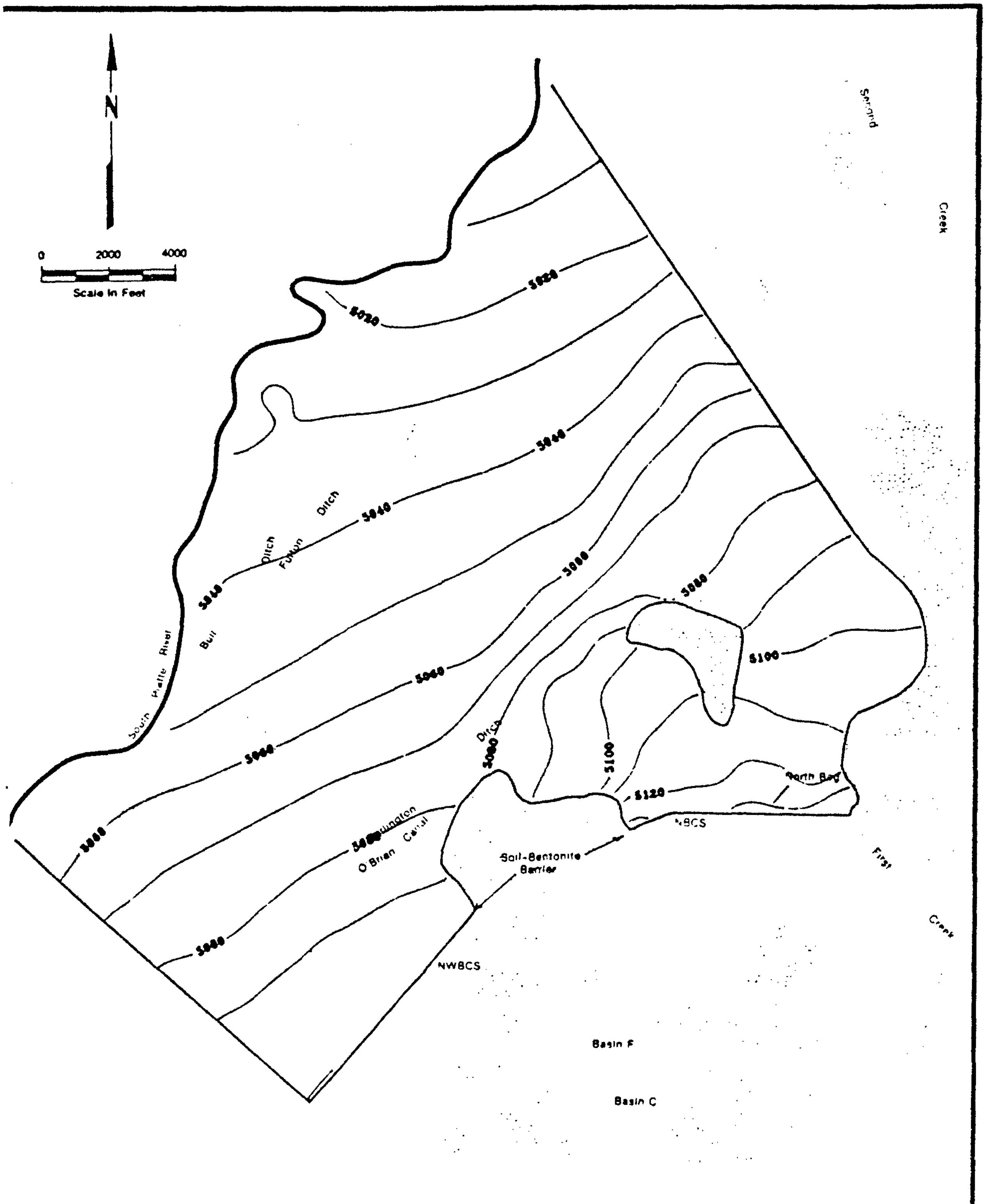
ure G-5b
ANSMISSIVITY MAP,
NTOUR INTERVAL (5,000-25,000 ft²/day)
RCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



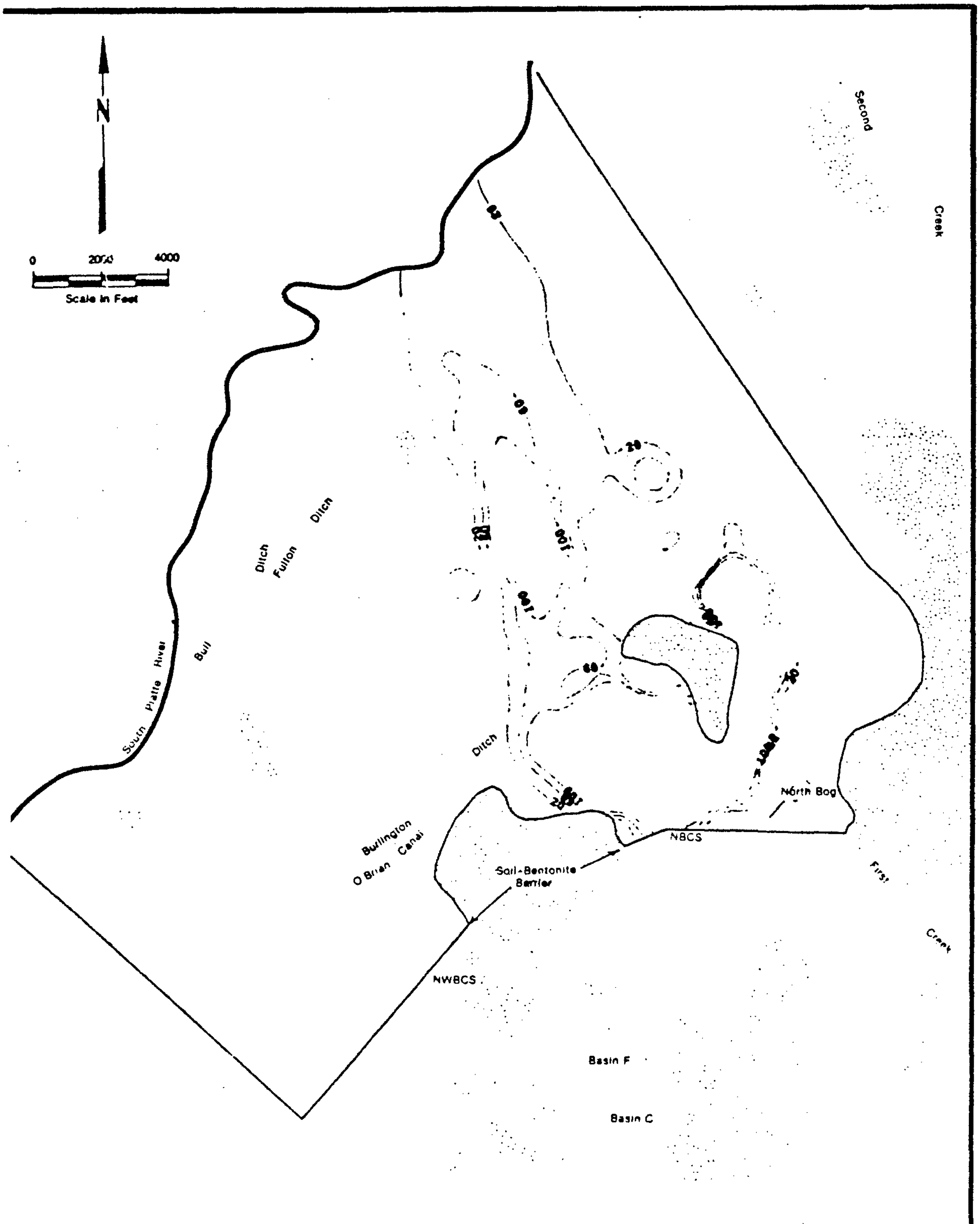
ure G-6
.TER TABLE ELEVATION MAP, SPRING
i7, CONTOURS IN FEET ABOVE MSL
RCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



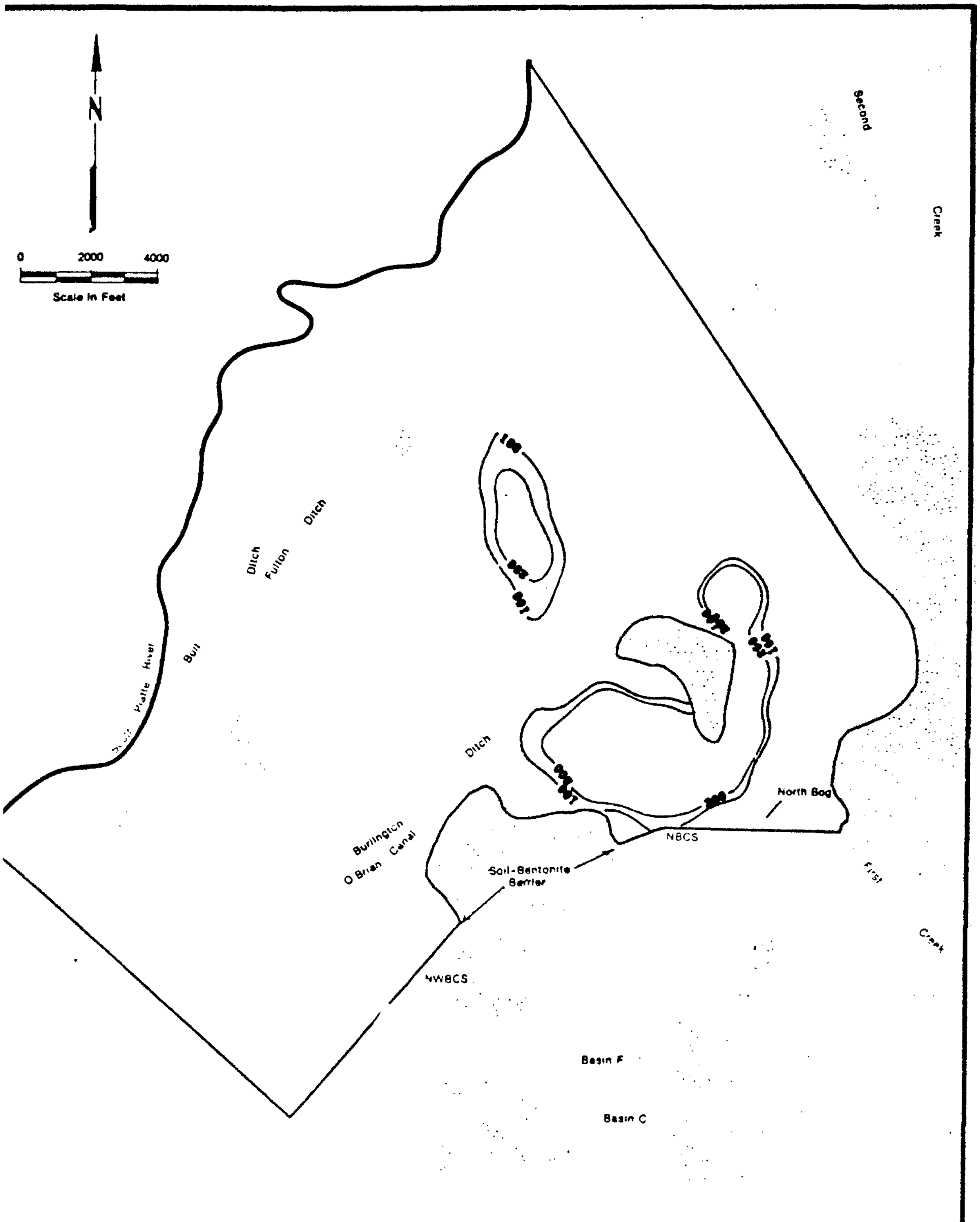
jure G-7
)DEL CALCULATED STEADY STATE,
ATER TABLE ELEVATION MAP, CONTOURS
FEET ABOVE MSL
IRCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

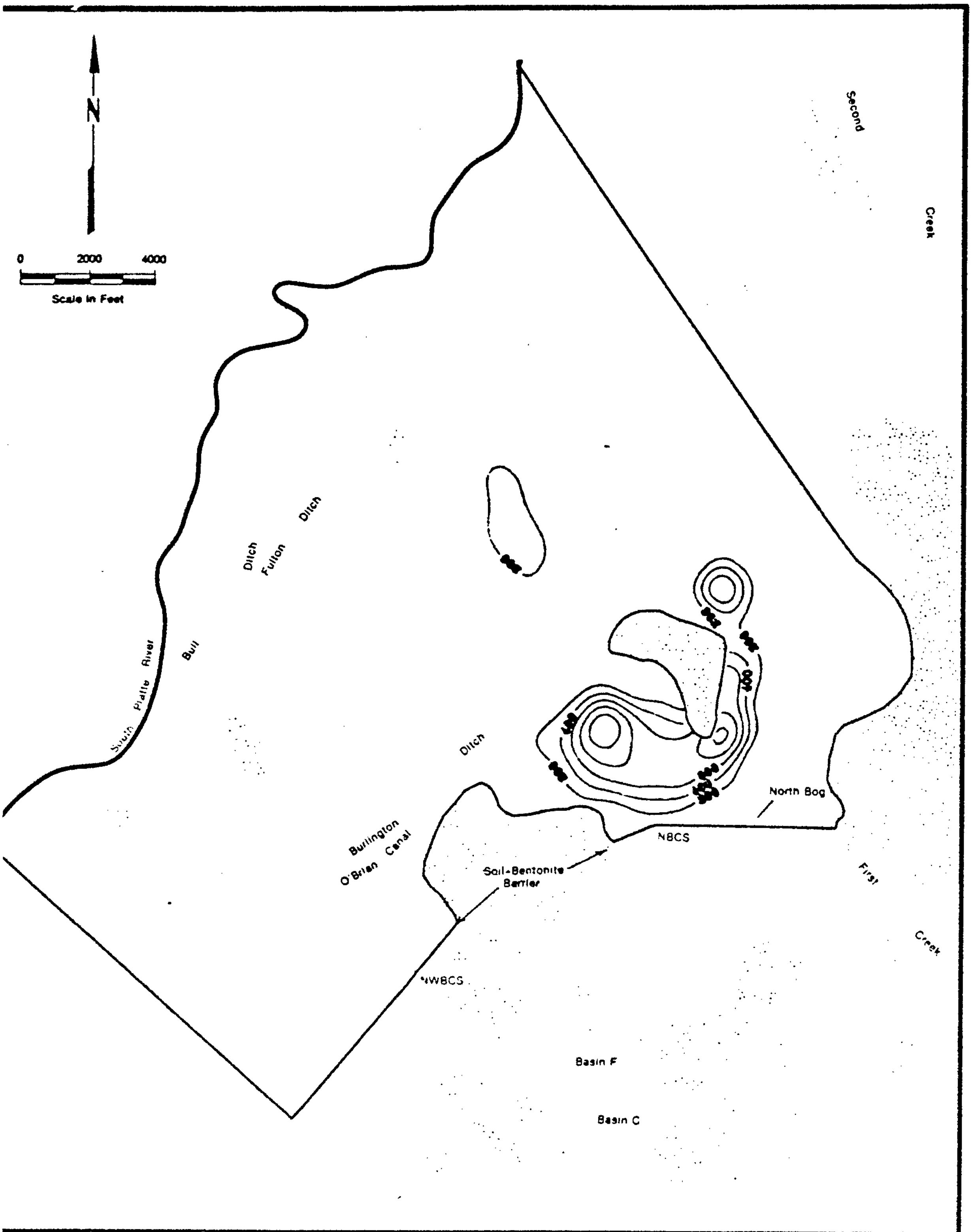


ure G-8a
1P CONCENTRATION DISTRIBUTION, 1987,
.UVIAL AQUIFER, CONTOUR INTERVAL
-100 ug/l)
RCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

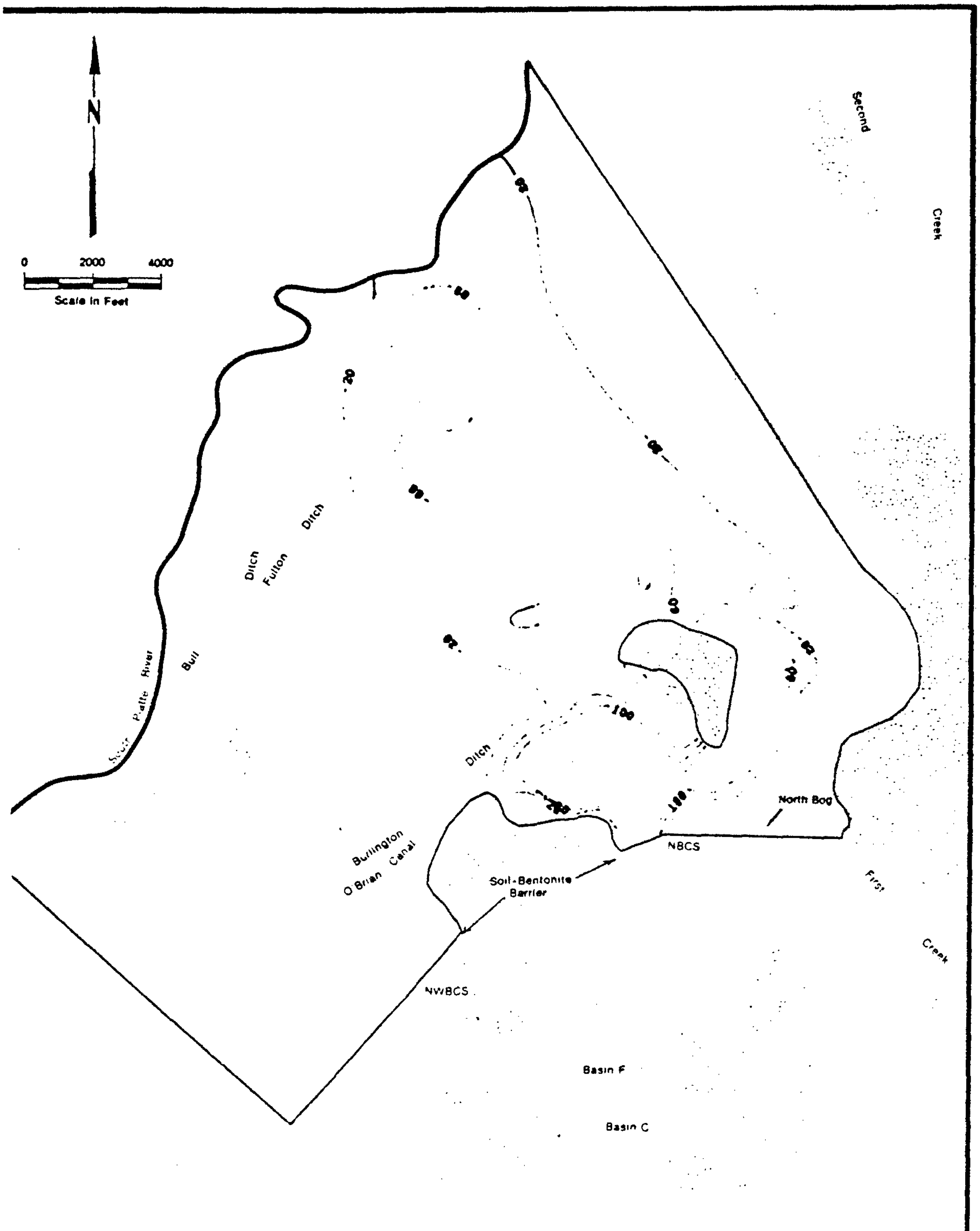


ure G-8b IP CONCENTRATION DISTRIBUTION, 1987, .UVIAL AQUIFER, CONTOUR INTERVAL)-200 ug/l) ICE. WARNER, 1988	**Prepared for:** **U.S. Army Program Manager's Office** **For Rocky Mountain Arsenal** **Aberdeen Proving Ground, Maryland**



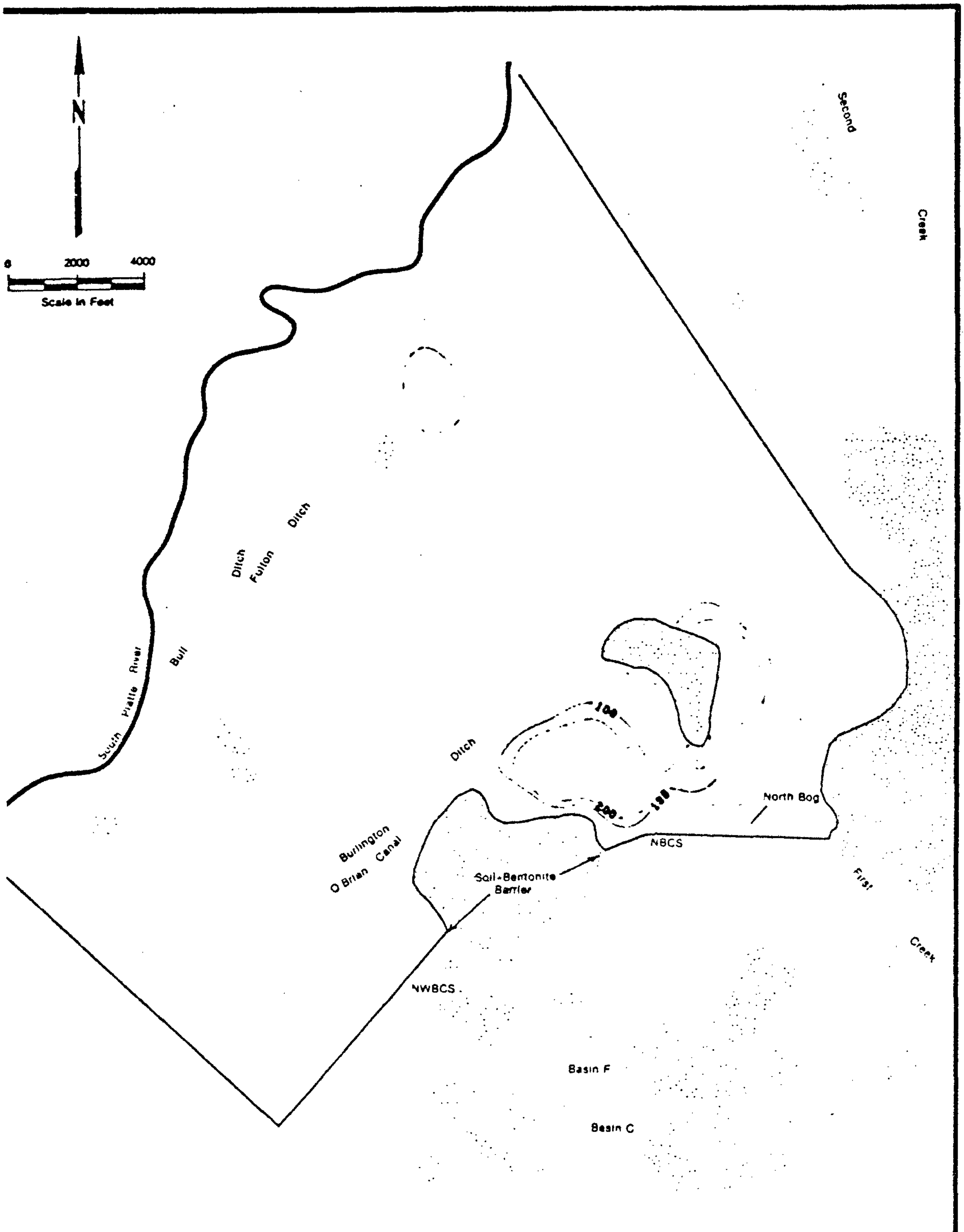
ure G-8c
IP CONCENTRATION DISTRIBUTION, 1987,
.UVIAL AQUIFER, CONTOUR INTERVAL
)-1000 ug/l)
ICE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



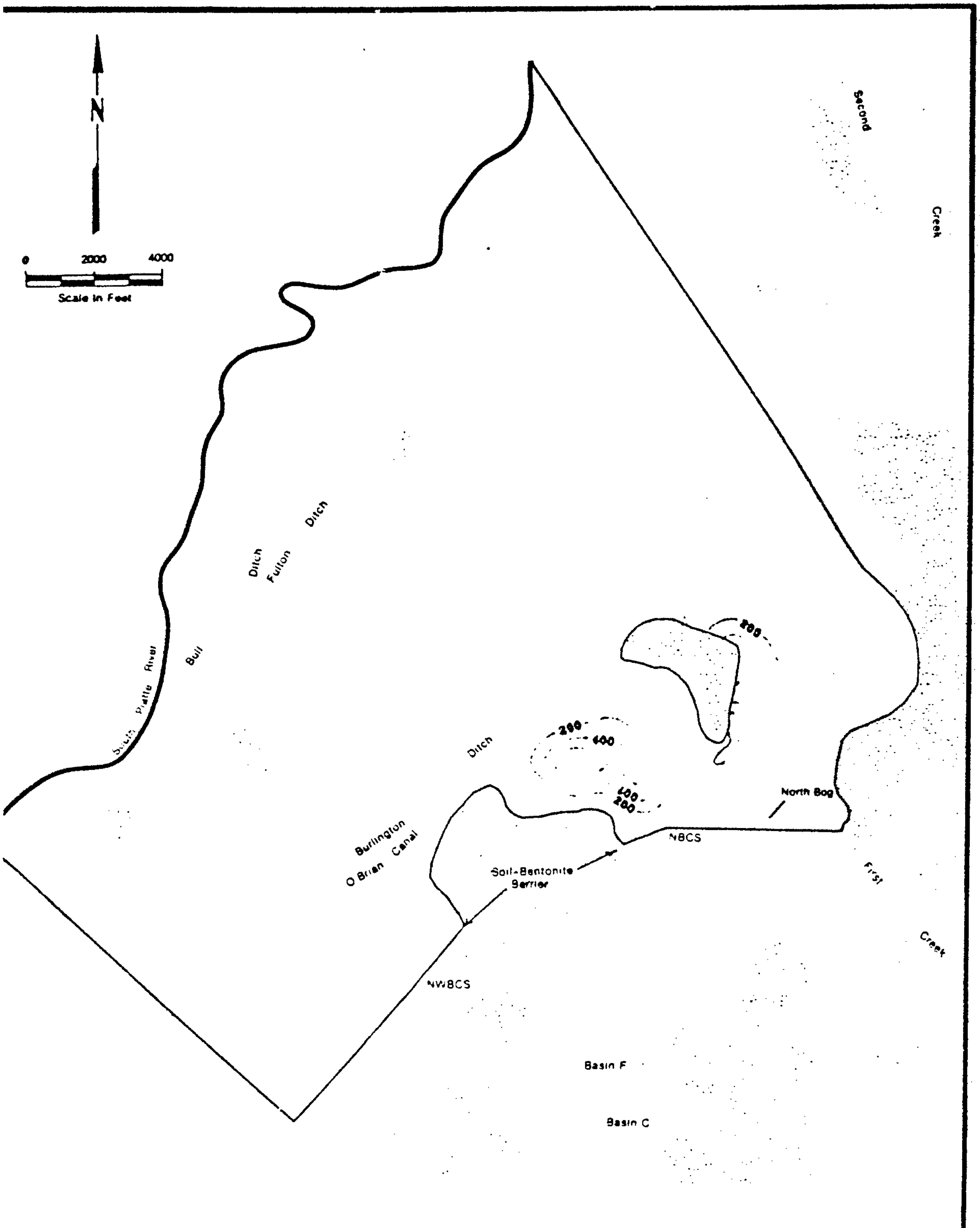
'e G-9a
CONCENTRATION DISTRIBUTION IN 1992
\RS) WITH EXISTING NORTH BOUNDARY
ARGE OPERATIONS, ALLUVIAL AQUIFER,
OUR INTERVAL (20-100 ug/l)
E: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



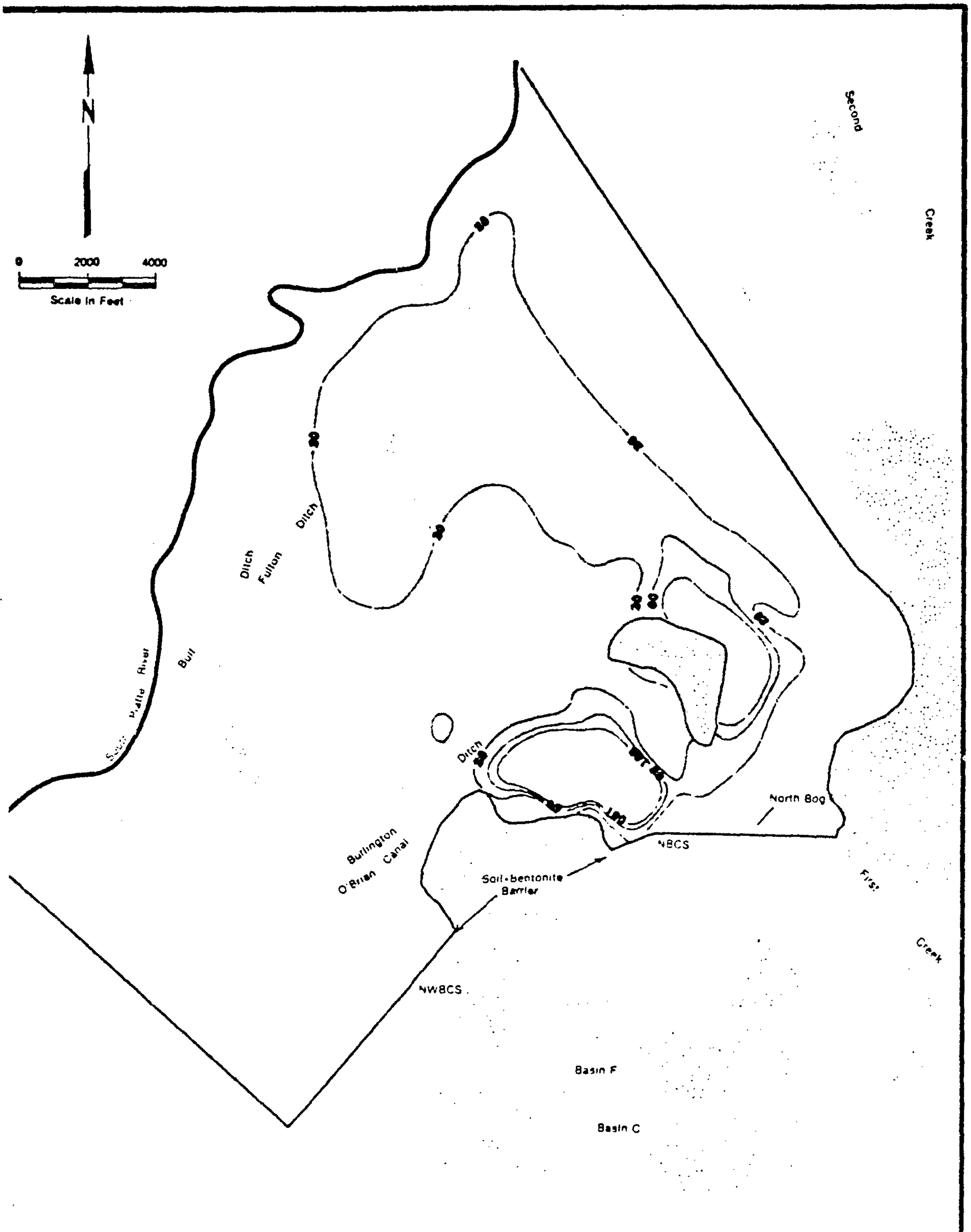
'e G-9b
CONCENTRATION DISTRIBUTION IN 1992
\RS) WITH EXISTING NORTH BOUNDARY
ARGE OPERATIONS, ALLUVIAL AQUIFER,
OUR INTERVAL (100-200 ug/l)
E. WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



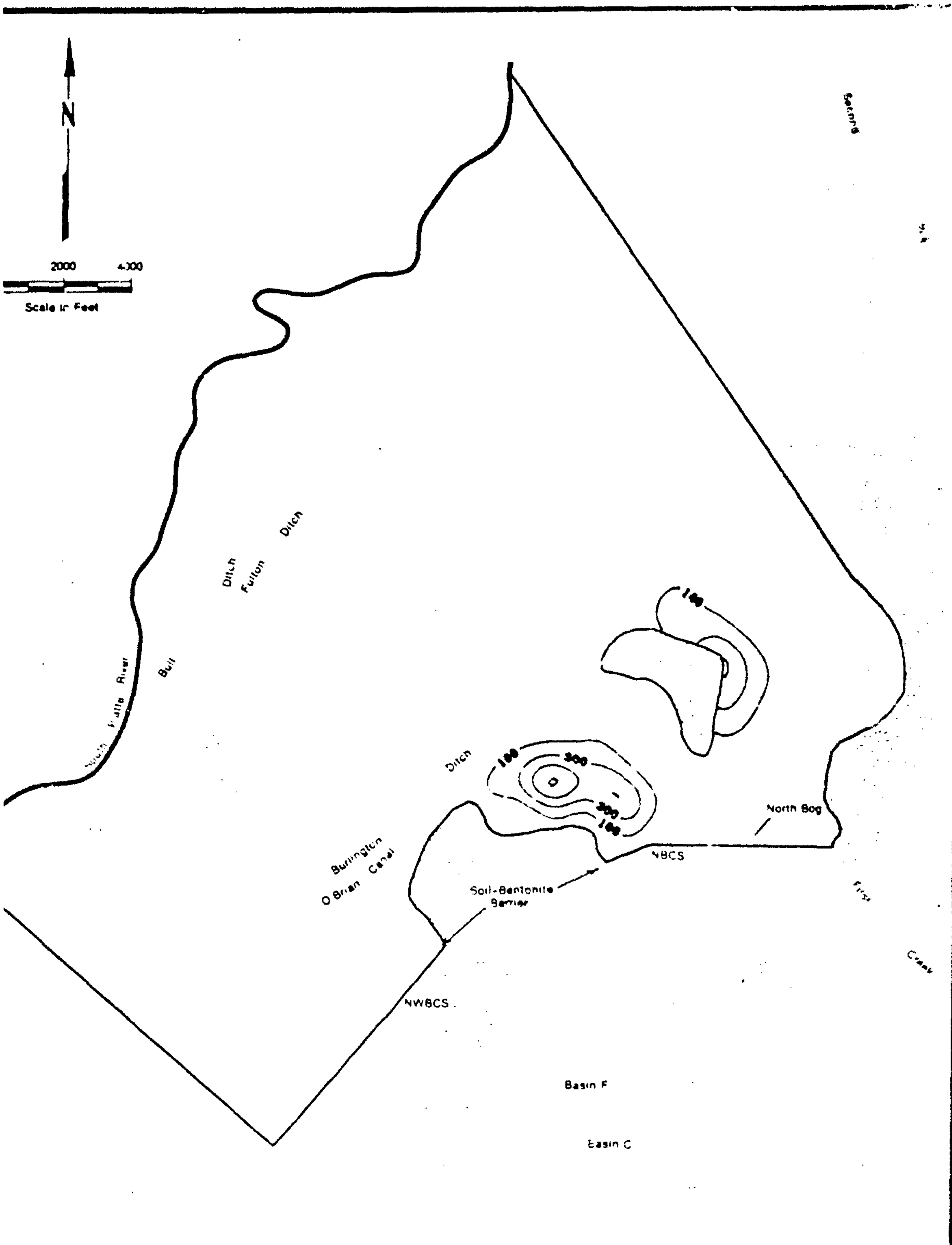
ıre G-9c
' CONCENTRATION DISTRIBUTION IN 1992
ARS) WITH EXISTING NORTH BOUNDARY
HARGE OPERATIONS, ALLUVIAL AQUIFER,
TOUR INTERVAL (200-800 ug/l)
CE WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



'e G-10a
CONCENTRATION DISTRIBUTION IN 1997
:ARS) WITH EXISTING NORTH BOUNDARY
ARGE OPERATIONS, ALLUVIAL AQUIFER,
OUR INTERVAL (20-100 ug/l)
E WARNER 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



G-10b
ONCENTRATION DISTRIBUTION IN 1997
RS) WITH EXISTING NORTH BOUNDARY
RGE OPERATIONS, ALLUVIAL AQUIFER,
JR INTERVAL (100-500 ug/l)
WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

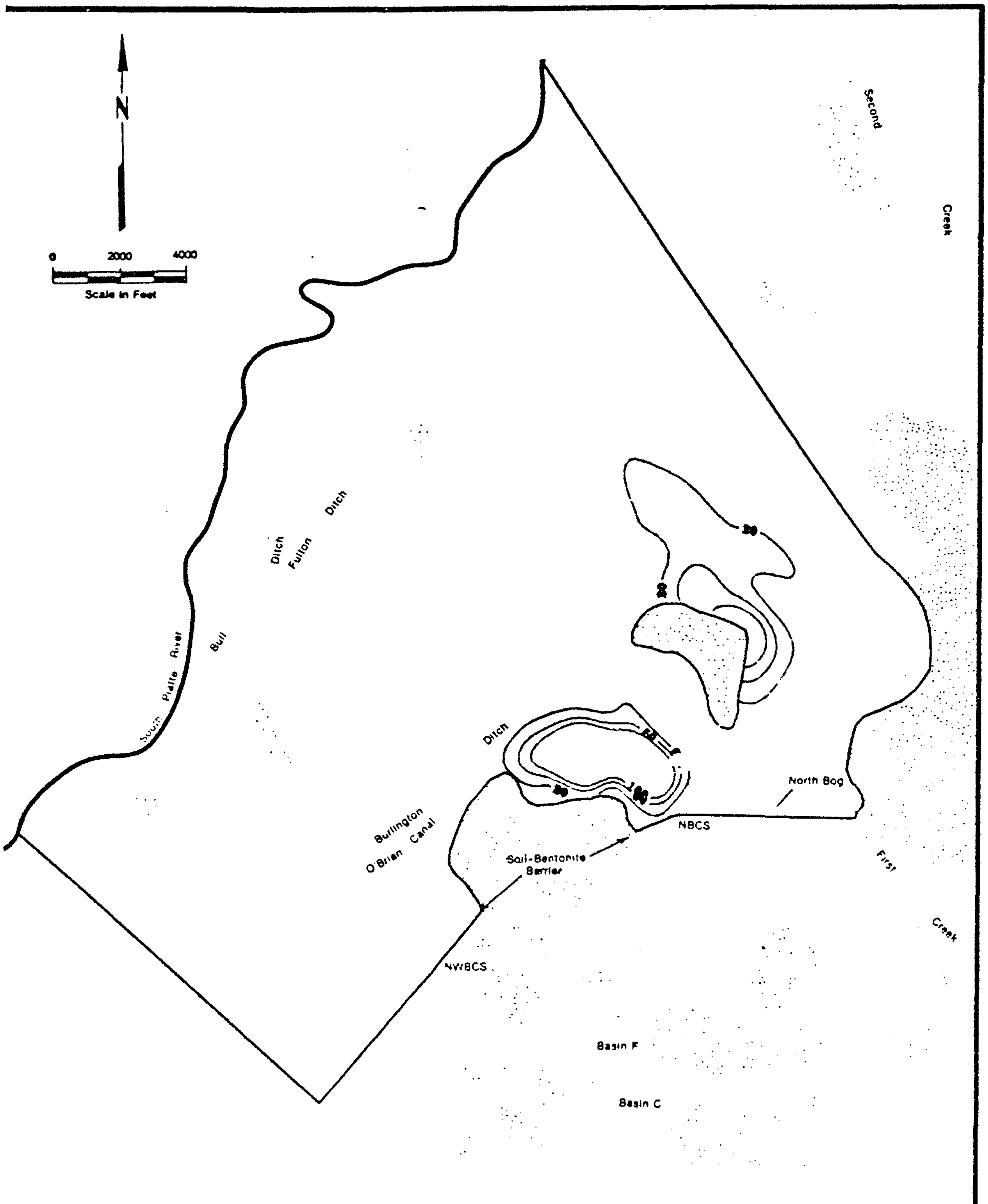
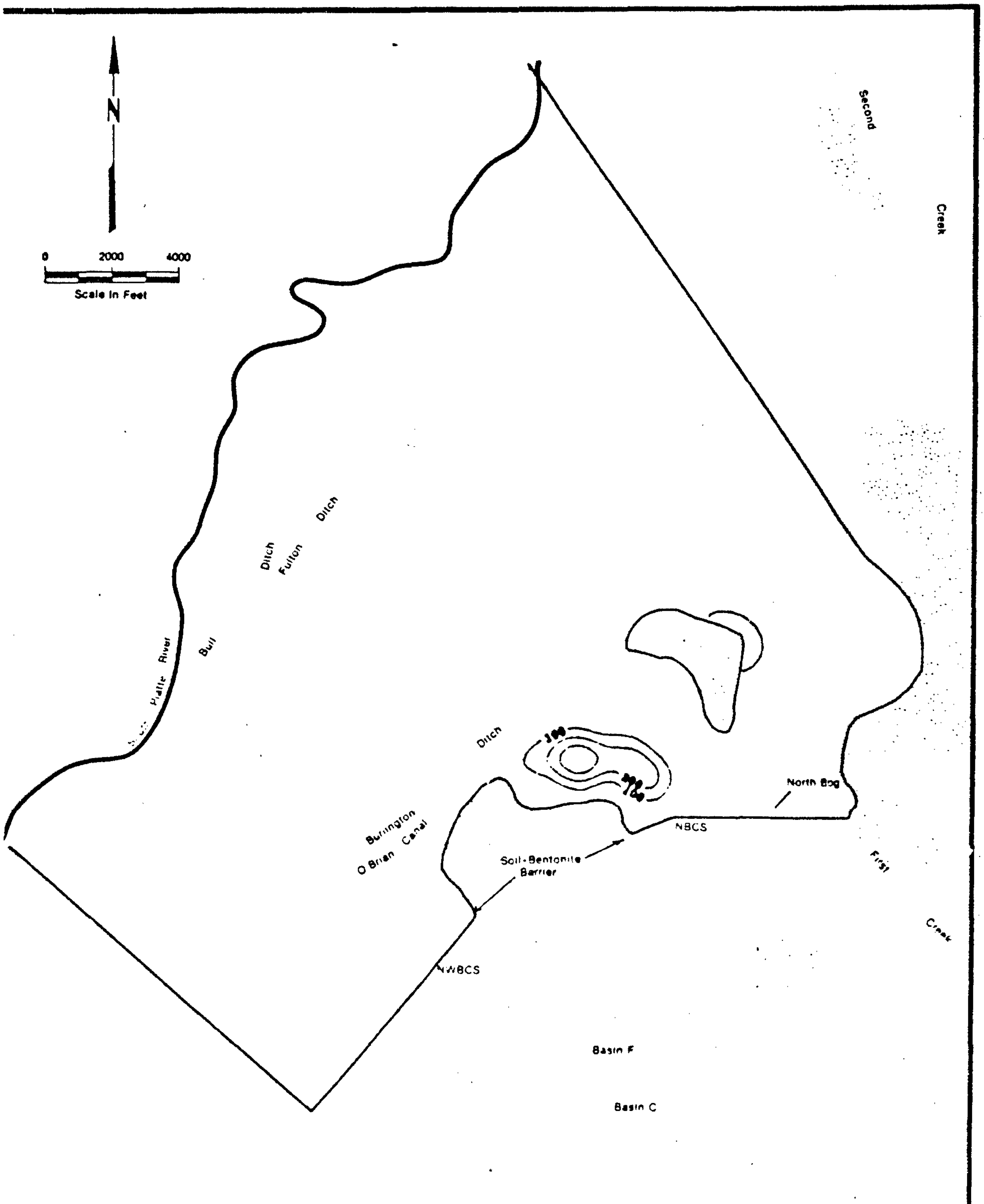


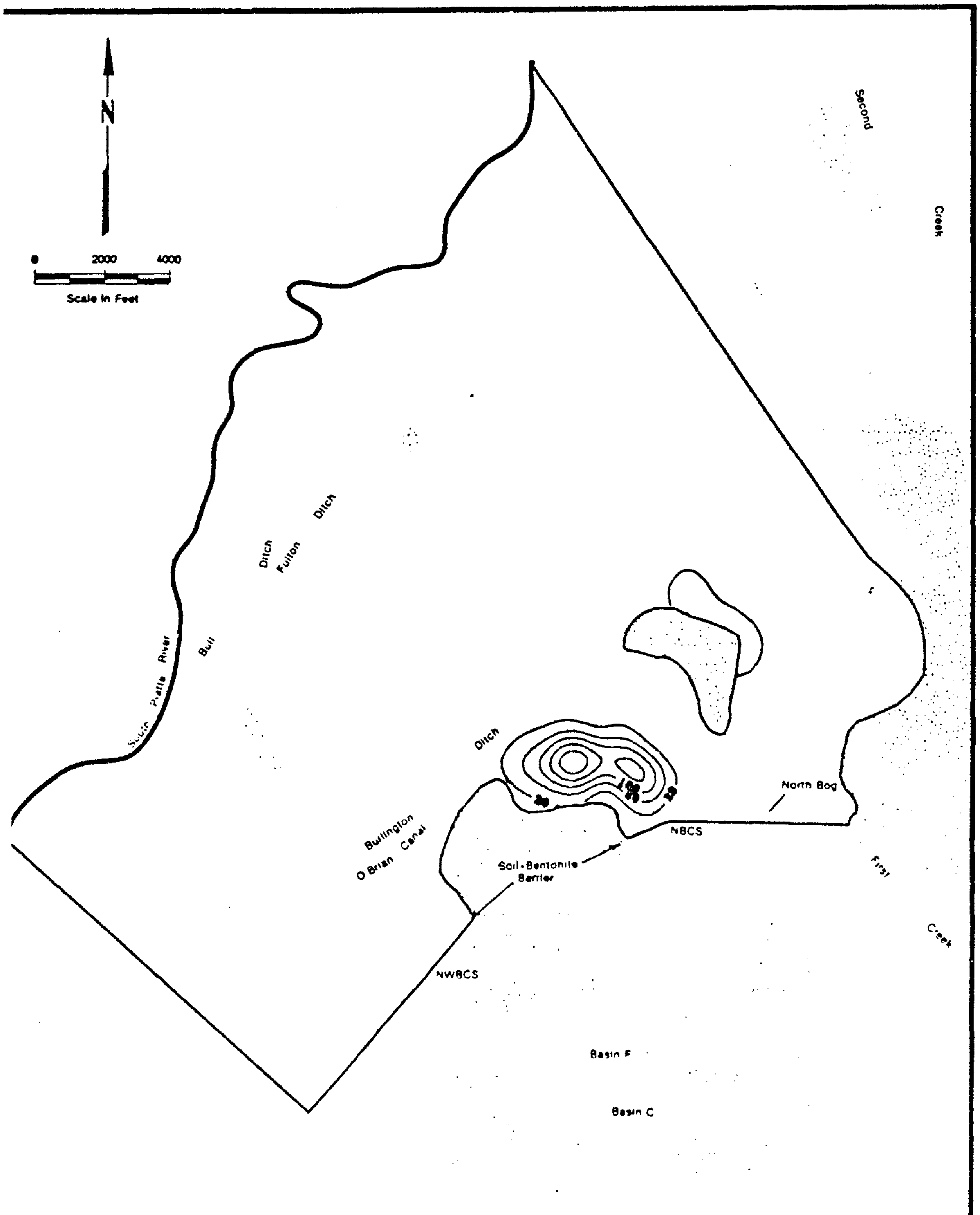
Figure G-11a
DIMP CONCENTRATION DISTRIBUTION IN 2007
(20 YEARS) WITH EXISTING NORTH BOUNDARY
RECHARGE OPERATIONS, ALLUVIAL AQUIFER,
CONTOUR INTERVAL (20-100 ug/l)
SOURCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



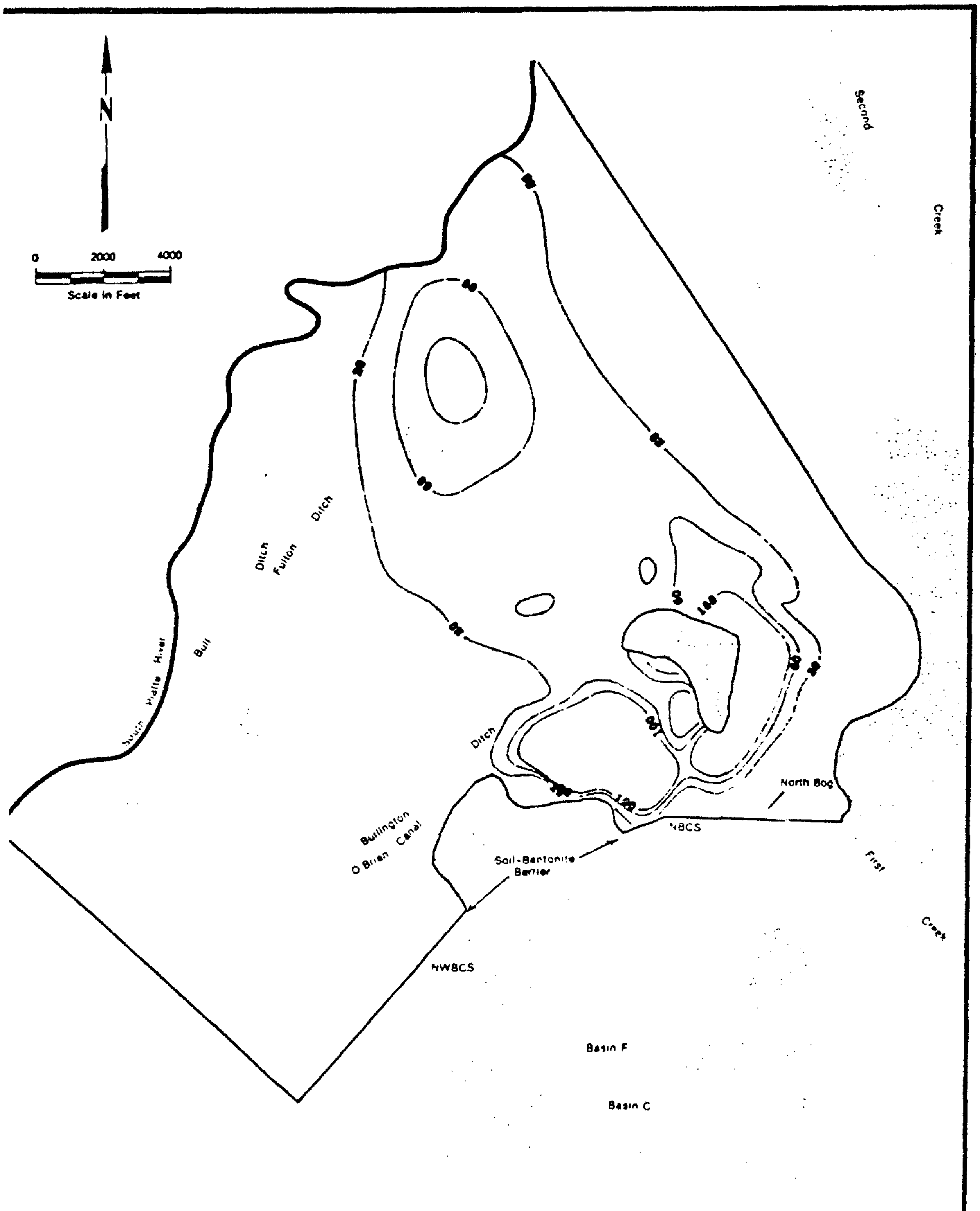
ɉure G-11b
ɅP CONCENTRATION DISTRIBUTION IN 2007
YEARS) WITH EXISTING NORTH BOUNDARY
ƆHARGE OPERATIONS, ALLUVIAL AQUIFER,
NTOUR INTERVAL (100-300 ug/l)
ɪRCE WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



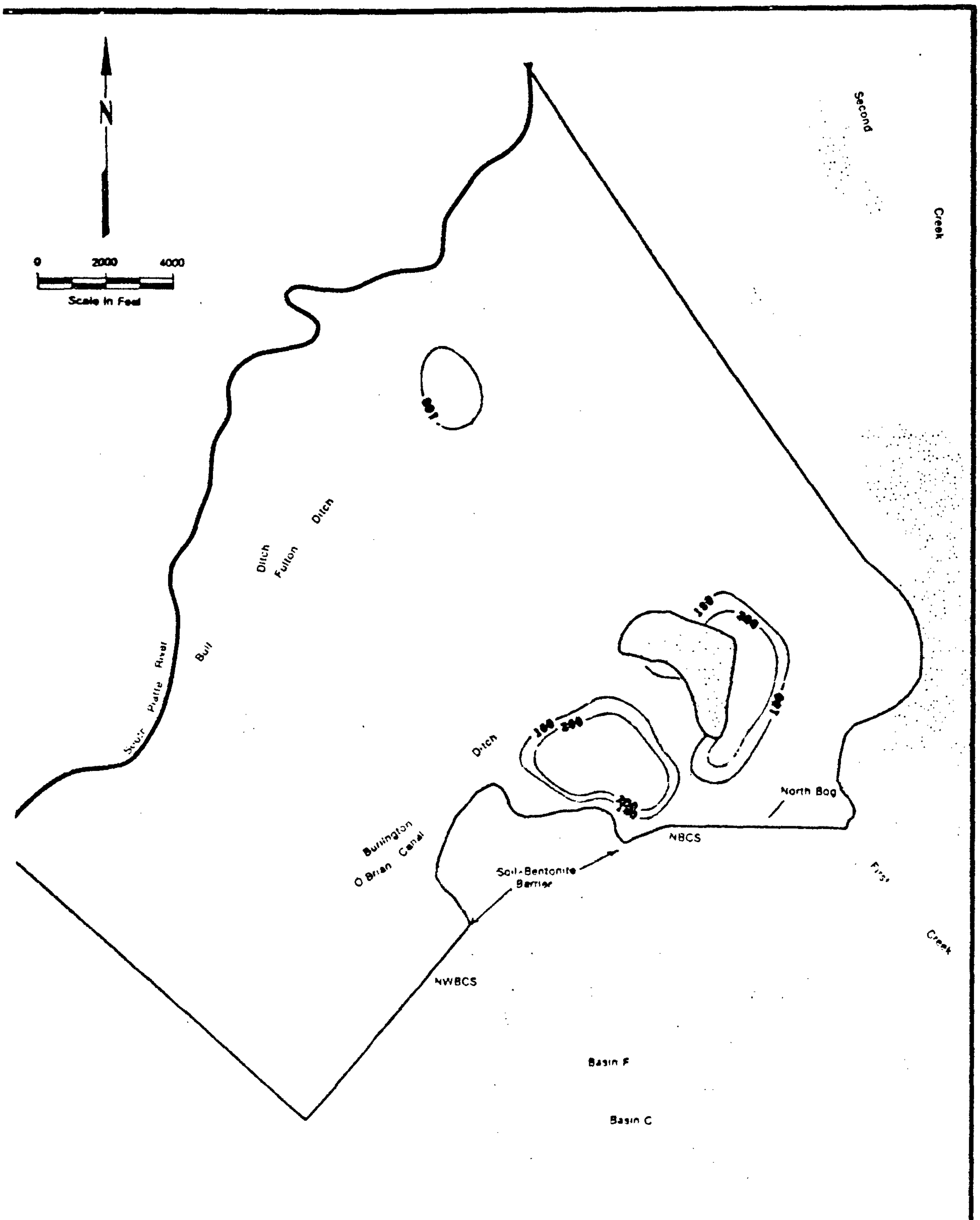
ure G-12
P CONCENTRATION DISTRIBUTION IN 2017
/EARS) WITH EXISTING NORTH BOUNDARY
HARGE OPERATIONS, ALLUVIAL AQUIFER,
ITOUR INTERVAL (20-180 ug/l)
ICE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



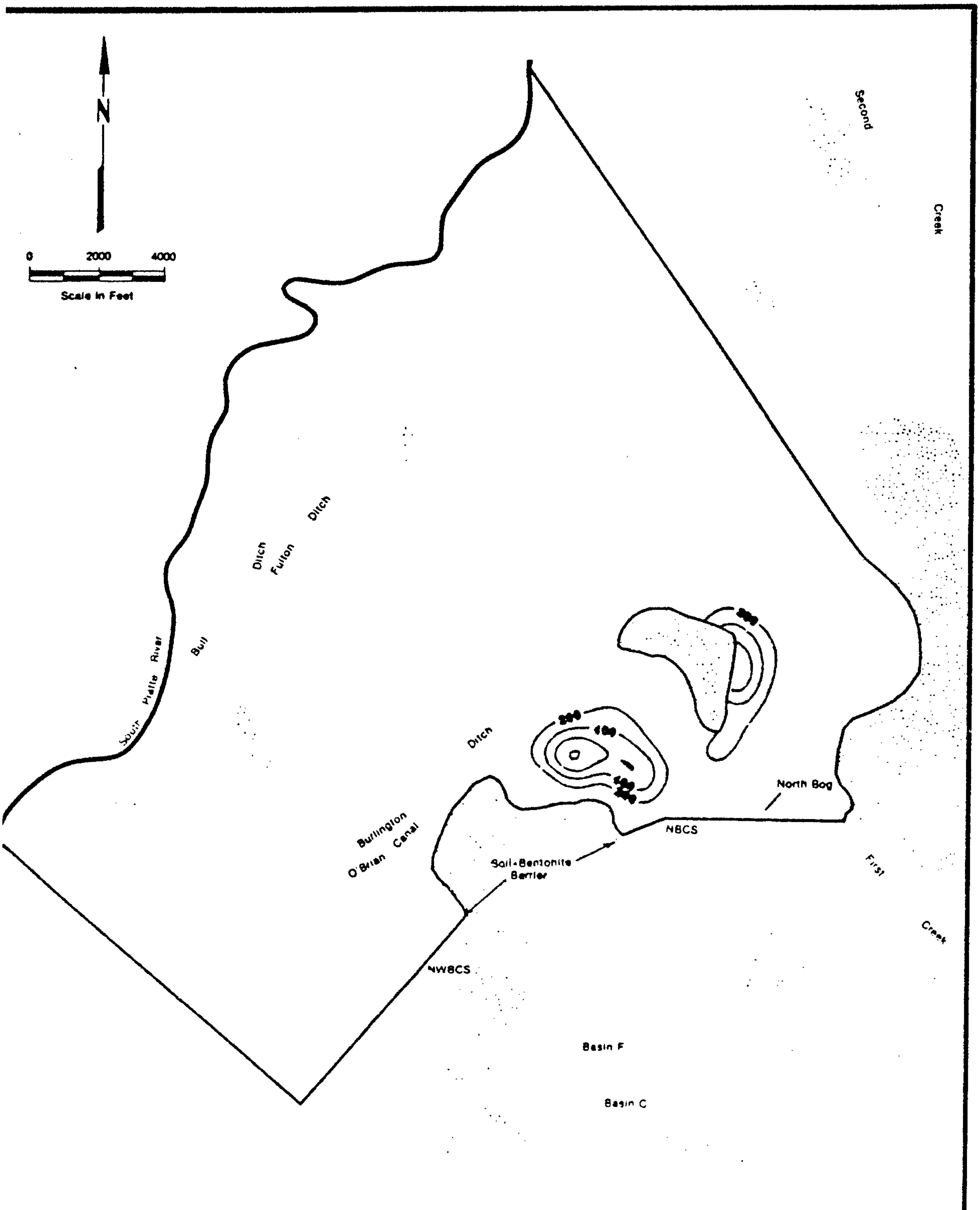
ure G-13a
P CONCENTRATION DISTRIBUTION IN 1992
EARS) WITH NORTH BOUNDARY RECHARGE
RATION FOR NATURAL FLOW CONDITIONS.
JVIAL AQUIFER, CONTOUR INTERVAL (20-100 ug/l)
ICE WARNER 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



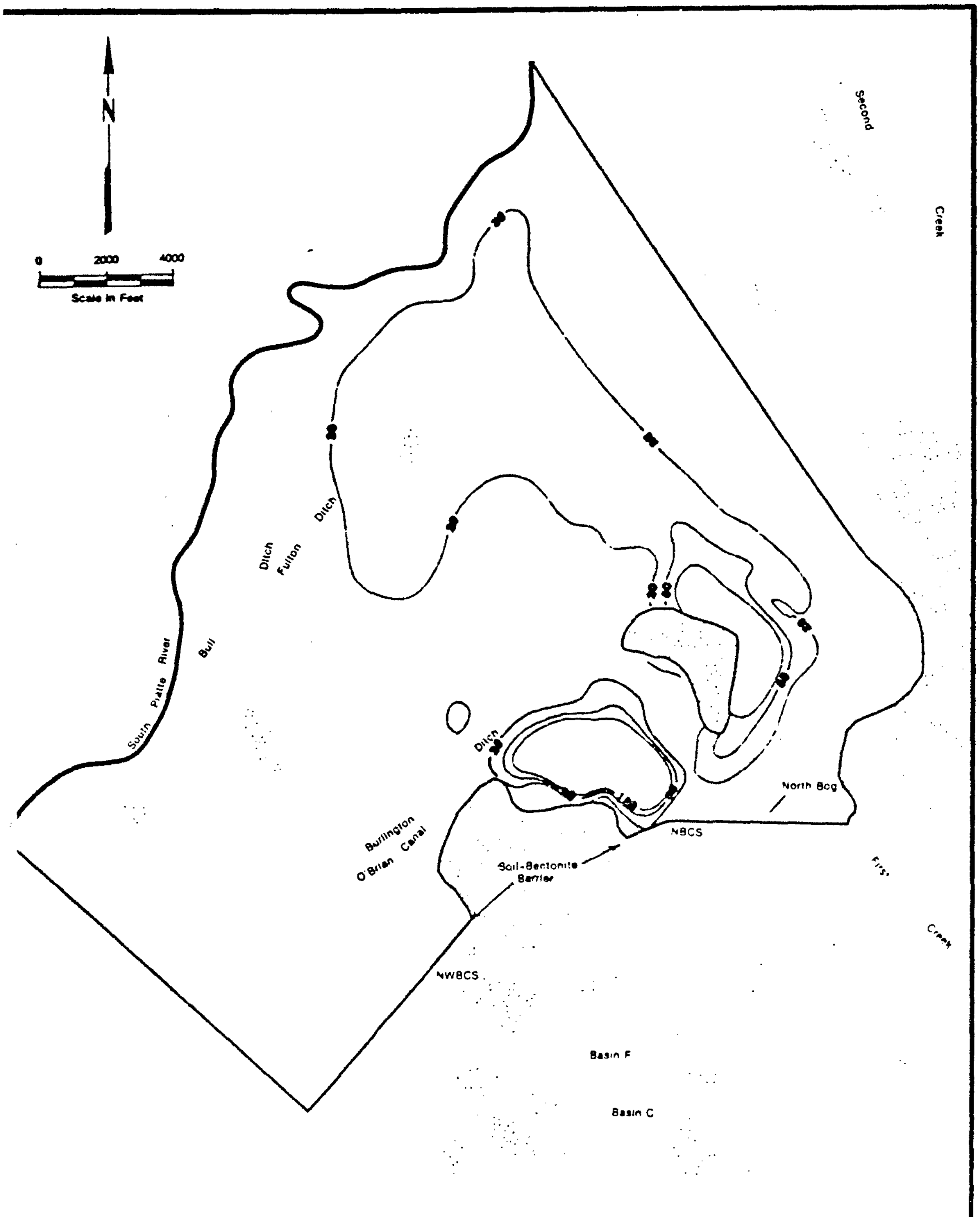
ıre G-13b
ʾ CONCENTRATION DISTRIBUTION IN 1992
ːARS) WITH NORTH BOUNDARY RECHARGE
ꓤATION FOR NATURAL FLOW CONDITIONS,
ЈVIAL AQUIFER, CONTOUR INTERVAL (100-200 ug/l)
ꞒE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



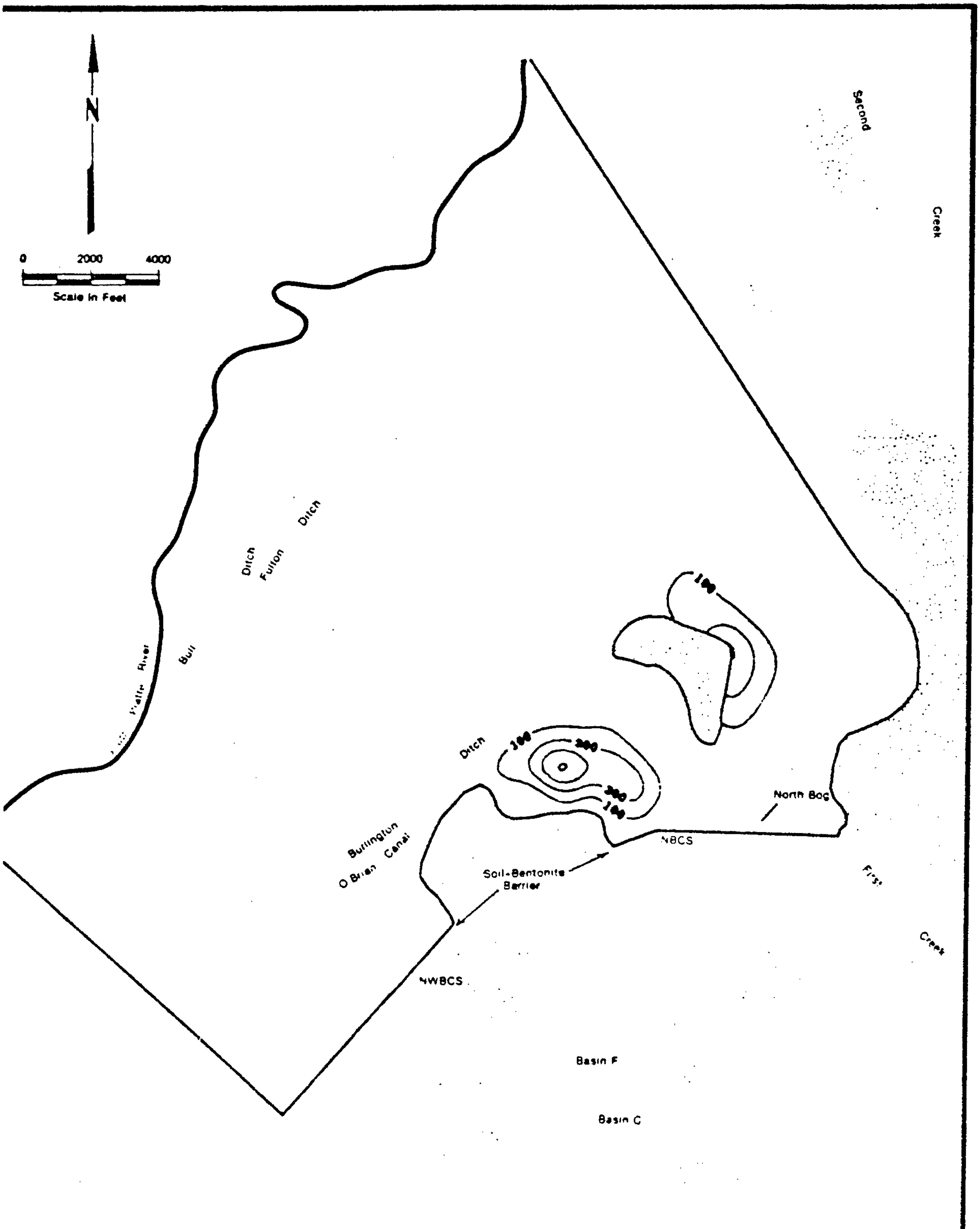
ıure G-13c
ıP CONCENTRATION DISTRIBUTION IN 1992
'EARS) WITH NORTH BOUNDARY RECHARGE
ERATION FOR NATURAL FLOW CONDITIONS,
LUVIAL AQUIFER, CONTOUR INTERVAL (200-800 ug/l)
RCE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



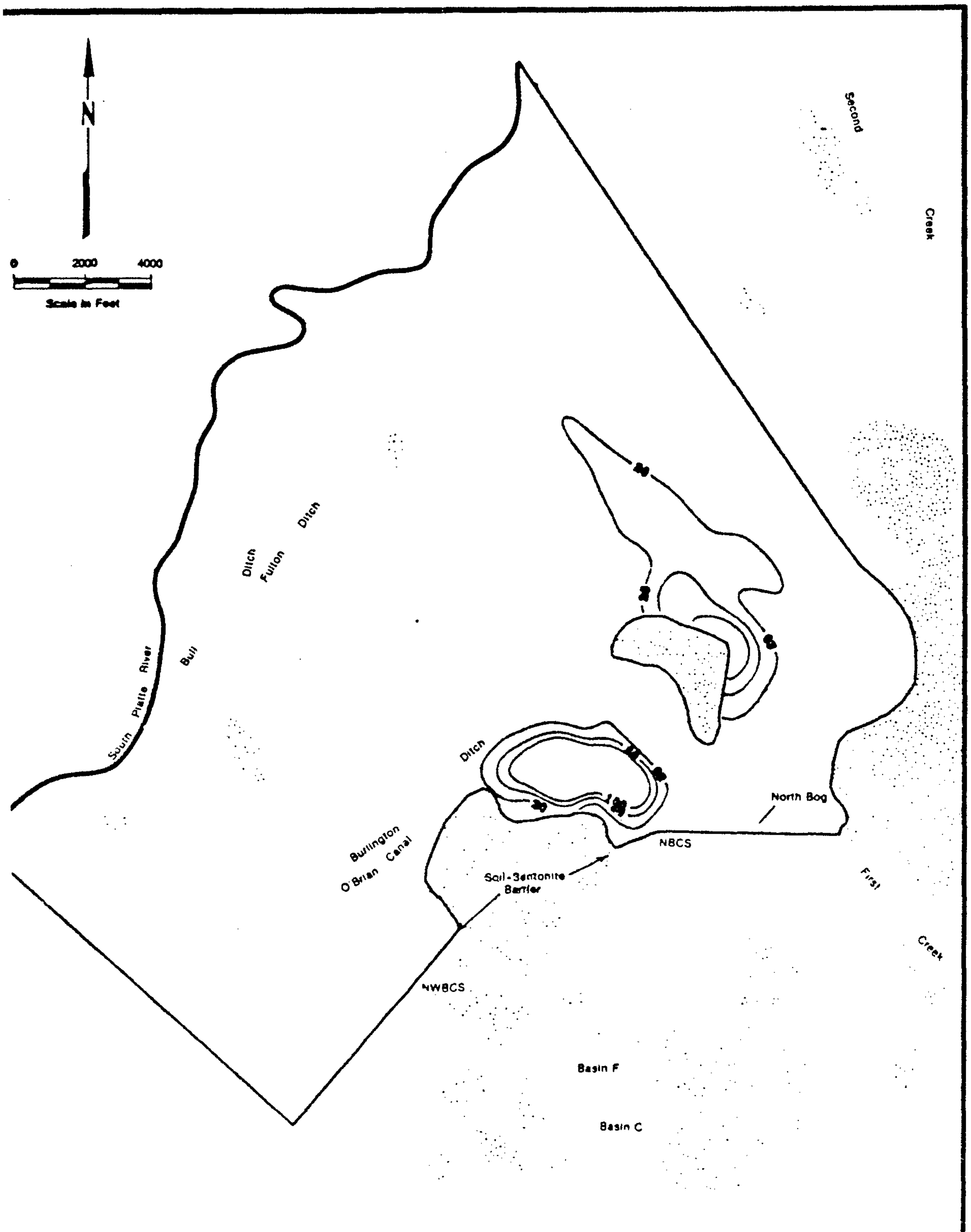
ıre G-14a
? CONCENTRATION DISTRIBUTION IN 1997
'EARS) WITH NORTH BOUNDARY RECHARGE
RATION FOR NATURAL FLOW CONDITIONS,
JVIAL AQUIFER, CONTOUR INTERVAL (20-100 ug/l)
CE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



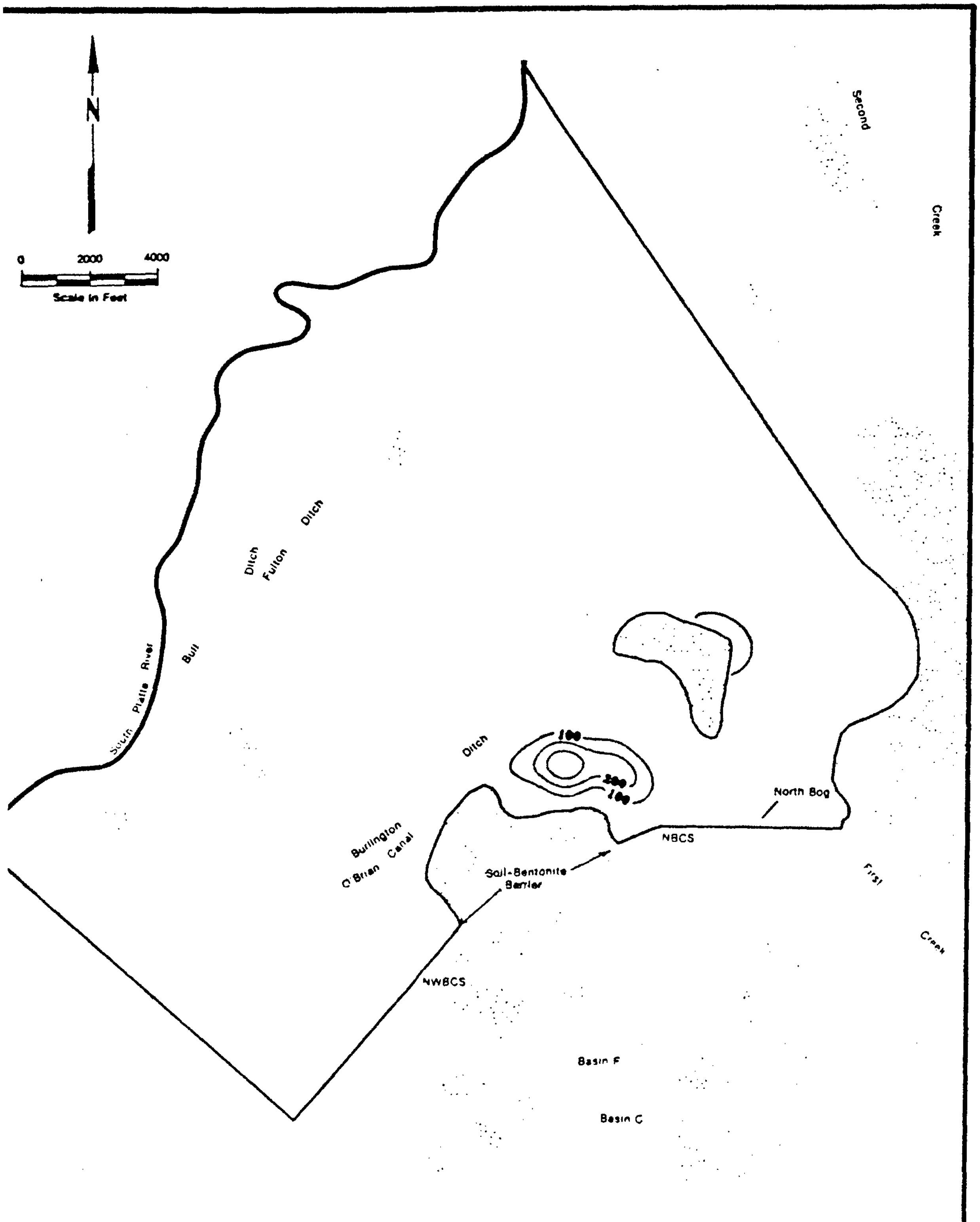
ıre G-14b
ʼ CONCENTRATION DISTRIBUTION IN 1997
EARS) WITH NORTH BOUNDARY RECHARGE
ɪATION FOR NATURAL FLOW CONDITIONS,
ɪVIAL AQUIFER, CONTOUR INTERVAL (100-700 ug/l)
CE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



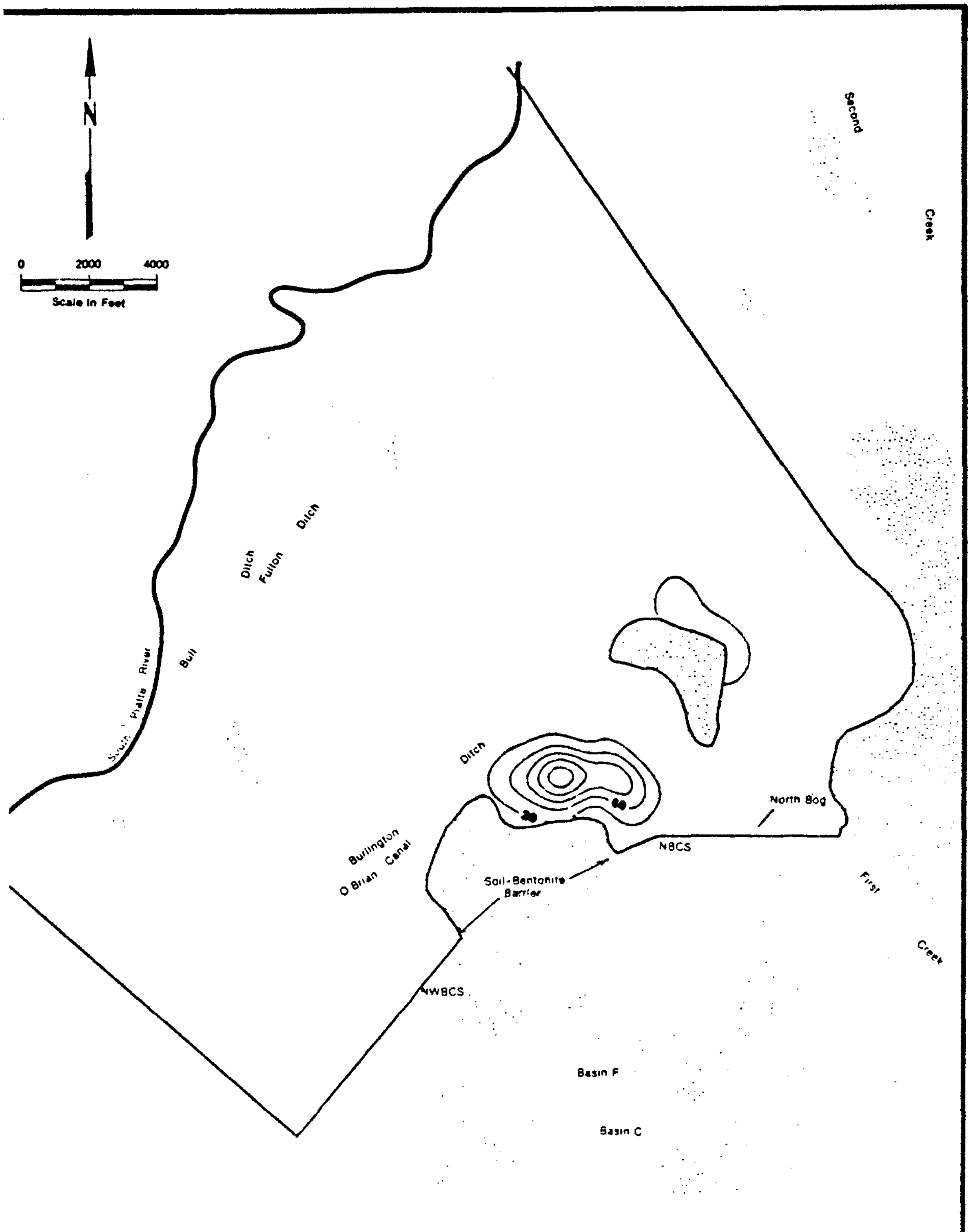
'e G-15a
CONCENTRATION DISTRIBUTION IN 2007
:ARS) WITH NORTH BOUNDARY RECHARGE
ATION FOR NATURAL FLOW CONDITIONS,
/IAL AQUIFER, CONTOUR INTERVAL (20-100 ug/l)
E: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



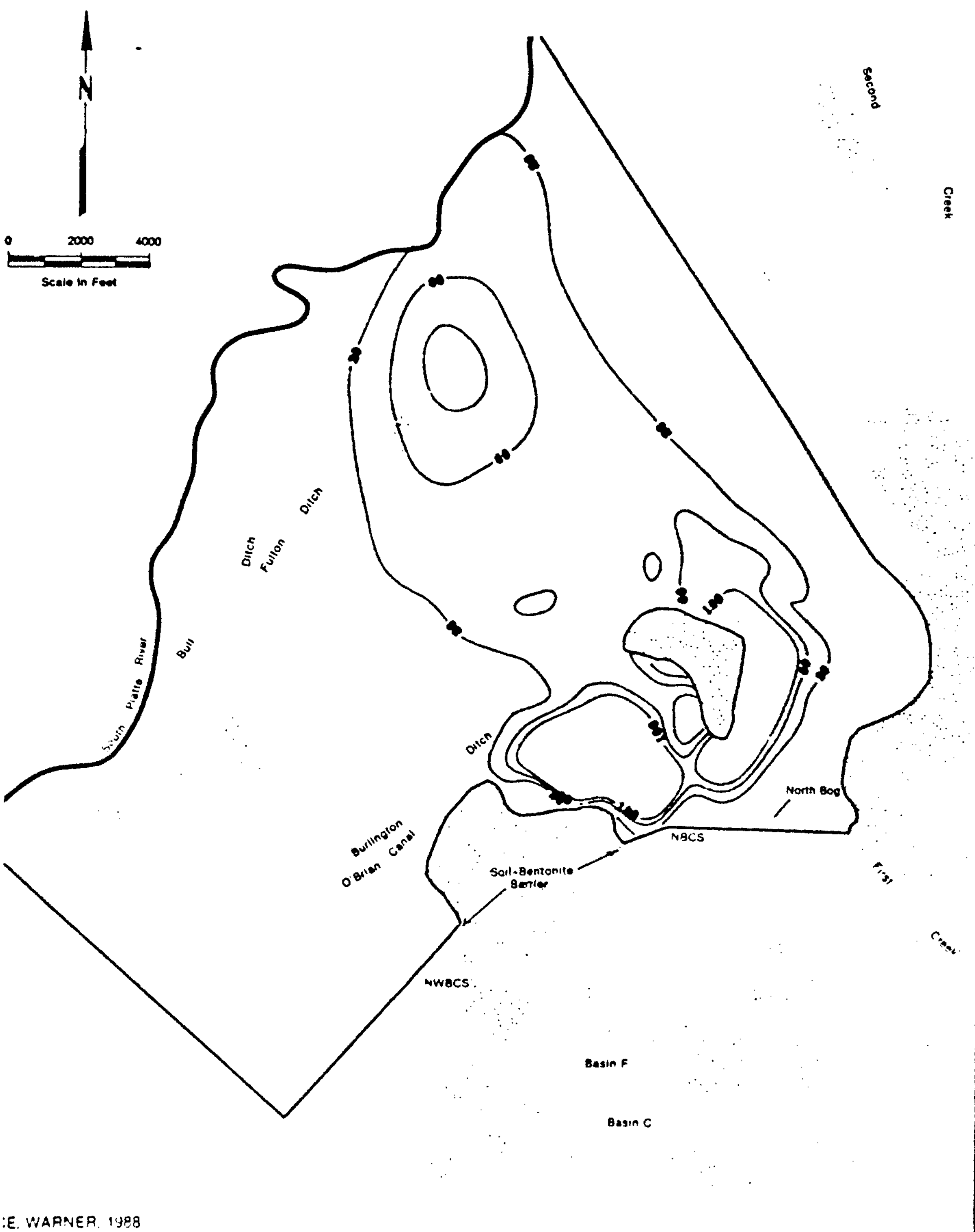
ıre G-15b
' CONCENTRATION DISTRIBUTION IN 2007
EARS) WITH NORTH BOUNDARY RECHARGE
ʒATION FOR NATURAL FLOW CONDITIONS,
VIAL AQUIFER, CONTOUR INTERVAL (100-300 ug/l)
ↄE: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



'e G-16
CONCENTRATION DISTRIBUTION IN 2017 (30
S) WITH NORTH BOUNDARY RECHARGE OPERA-
FOR NATURAL FLOW CONDITIONS, ALLUVIAL
'ER, CONTOUR INTERVAL (20-180 ug/l)
E. WARNER, 1988

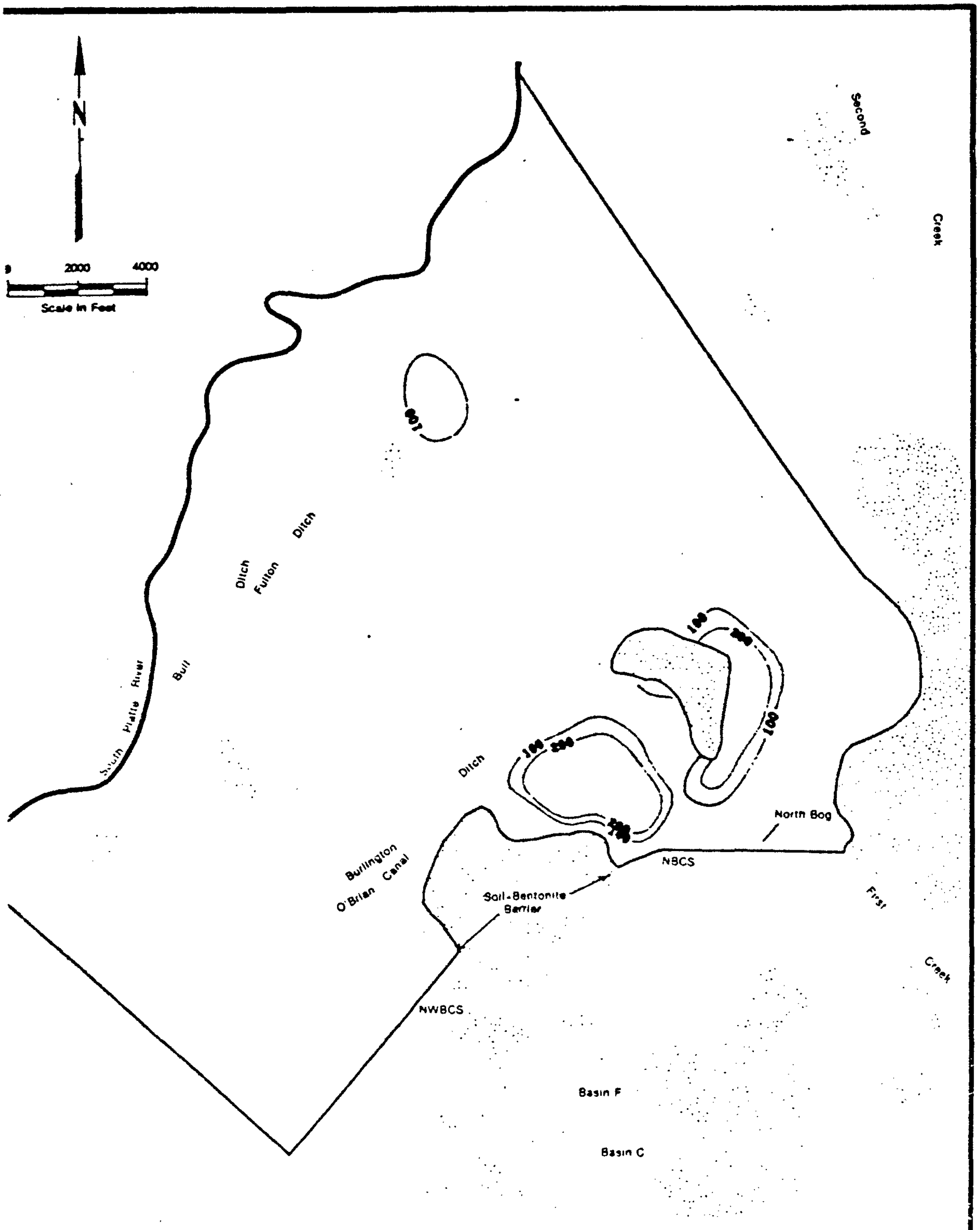
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:E. WARNER, 1988

'e G-17a
' CONCENTRATION DISTRIBUTION IN
(5 YEARS) WITH EXISTING NEW SOUTH
MS COUNTY WELL FIELD, ALLUVIAL
FER, CONTOUR INTERVAL (20-100 ug/l)

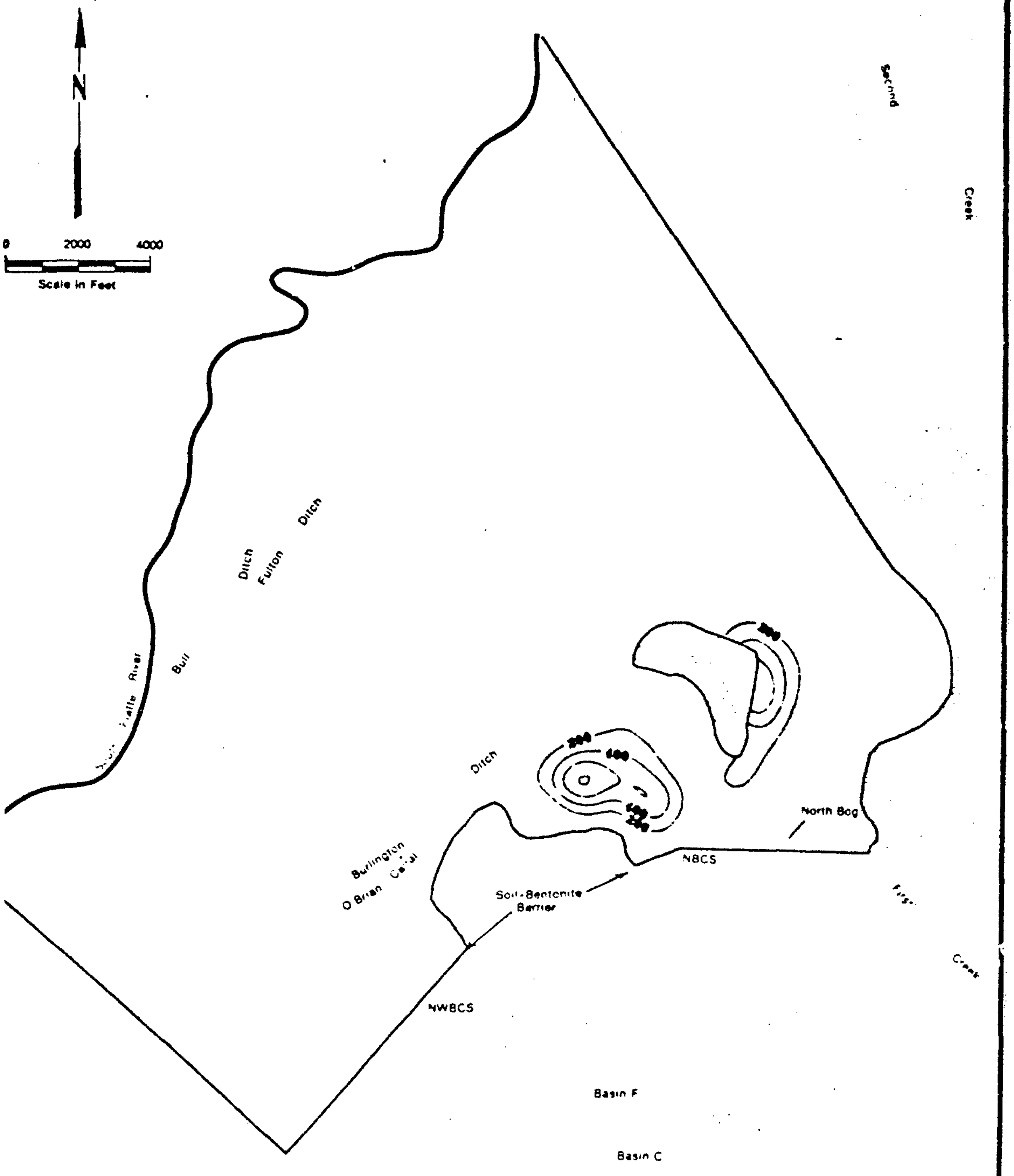
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



E: WARNER, 1988

e G-17b
CONCENTRATION DISTRIBUTION IN
(5 YEARS) WITH EXISTING NEW SOUTH
MS COUNTY WELL FIELD, ALLUVIAL
FER, CONTOUR INTERVAL (100-200 ug/l)

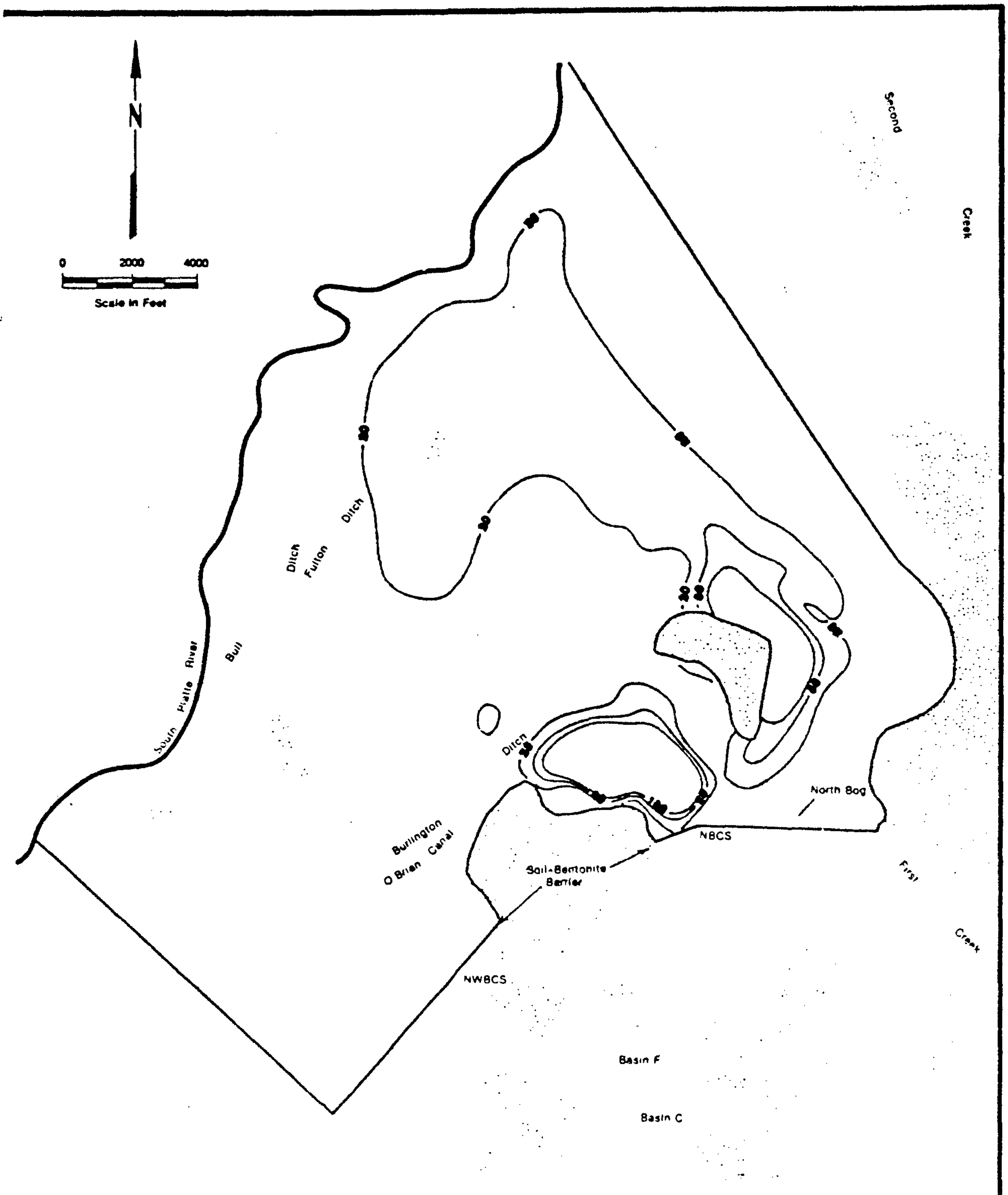
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



: WARNER, 1988

: G-17c
CONCENTRATION DISTRIBUTION IN
5 YEARS) WITH EXISTING NEW SOUTH
S COUNTY WELL FIELD, ALLUVIAL
'ER, CONTOUR INTERVAL (200-800 ug/l)

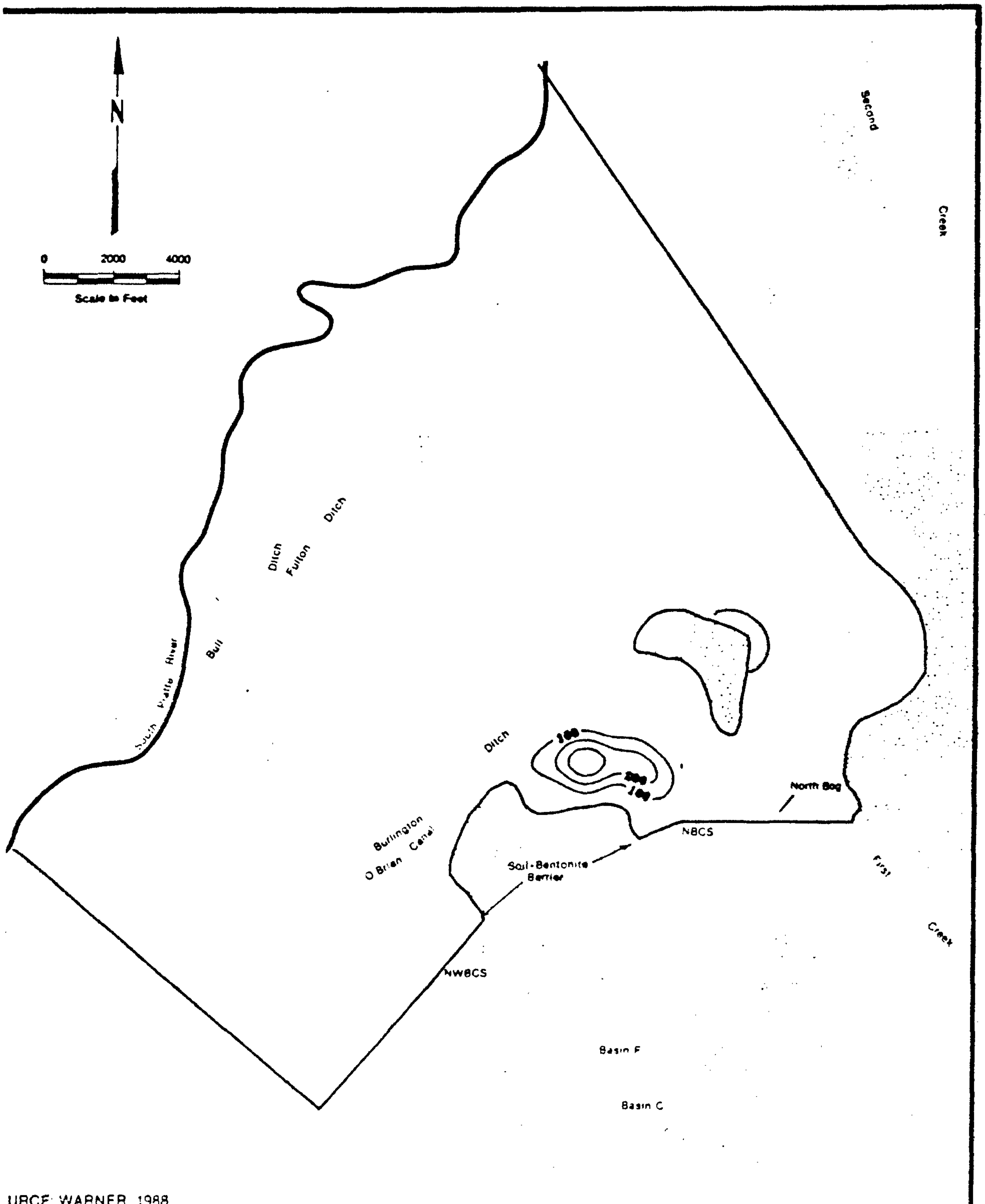
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



SOURCE: WARNER, 1988

Figure G-18a
DIMP CONCENTRATION DISTRIBUTION IN 1997 (10 YEARS) WITH EXISTING NEW SOUTH ADAMS COUNTY WELL FIELD, ALLUVIAL AQUIFER, CONTOUR INTERVAL (20-100 ug/l)

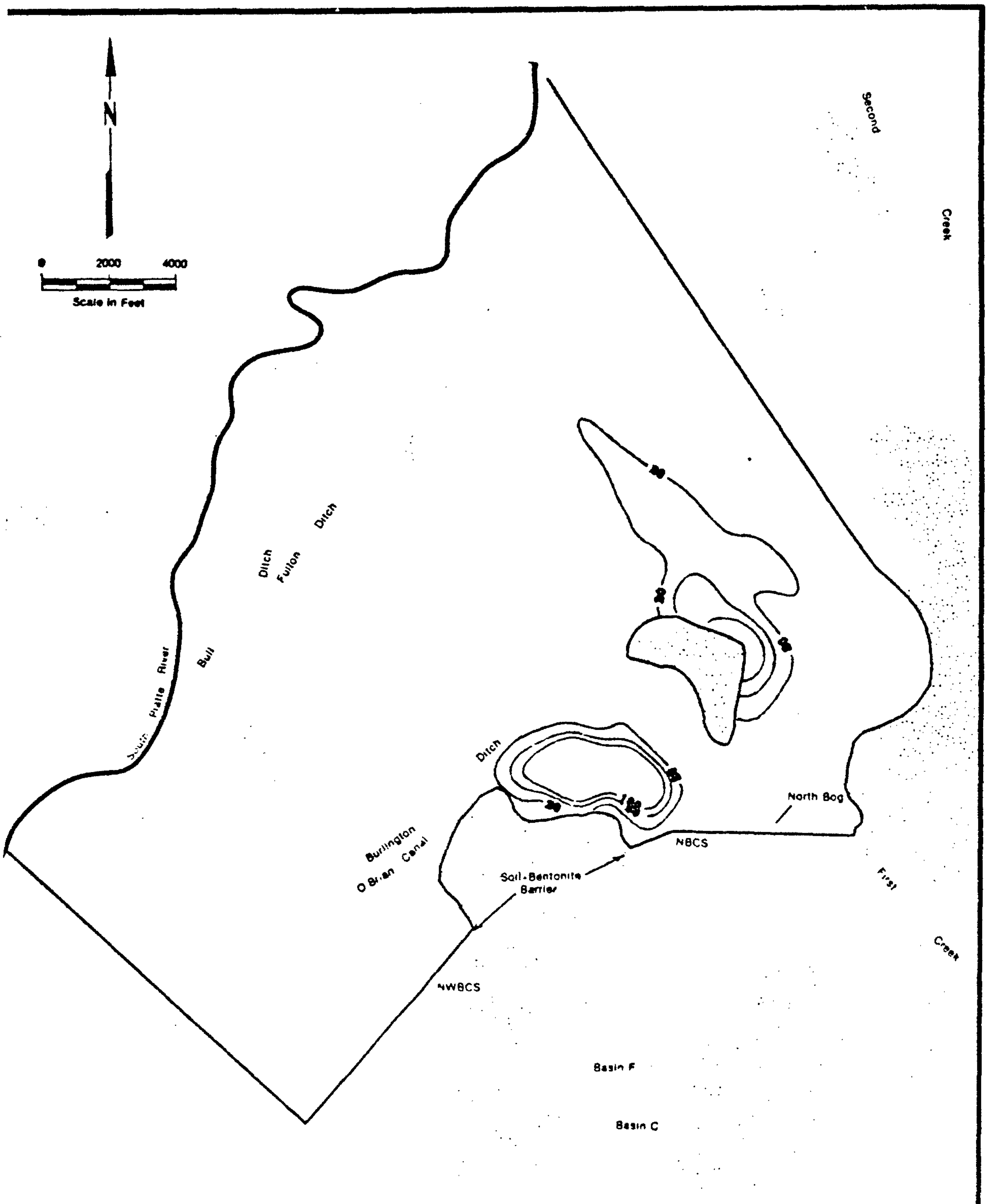
Prepared for:
U.S. Army Program Manager's Office For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



URCE: WARNER, 1988

gure G-18b
MP CONCENTRATION DISTRIBUTION IN
97 (10 YEARS) WITH EXISTING NEW SOUTH
DAMS COUNTY WELL FIELD, ALLUVIAL
QUIFER, CONTOUR INTERVAL (100-700 ug/l)

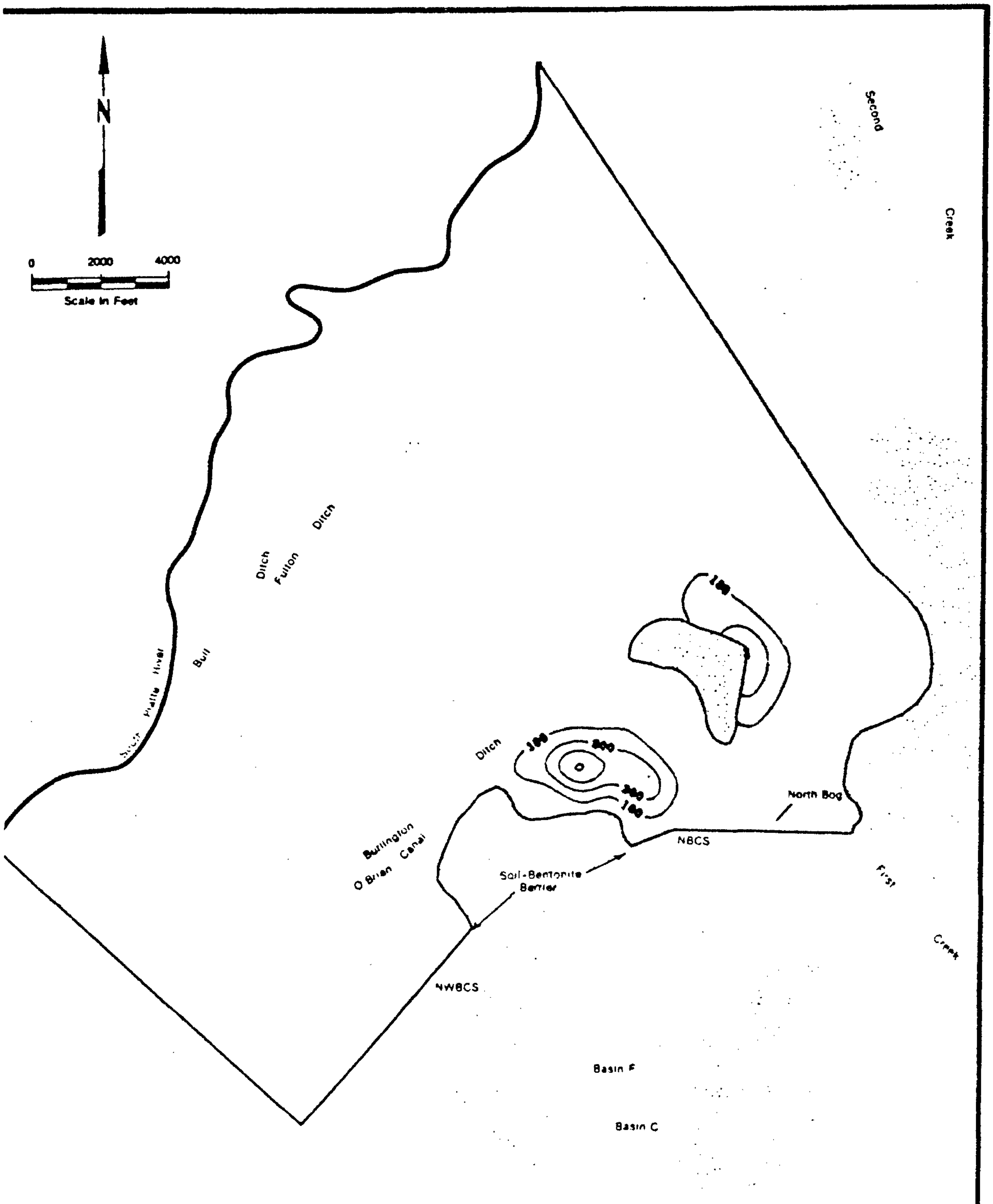
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



)URCE WARNER, 1988

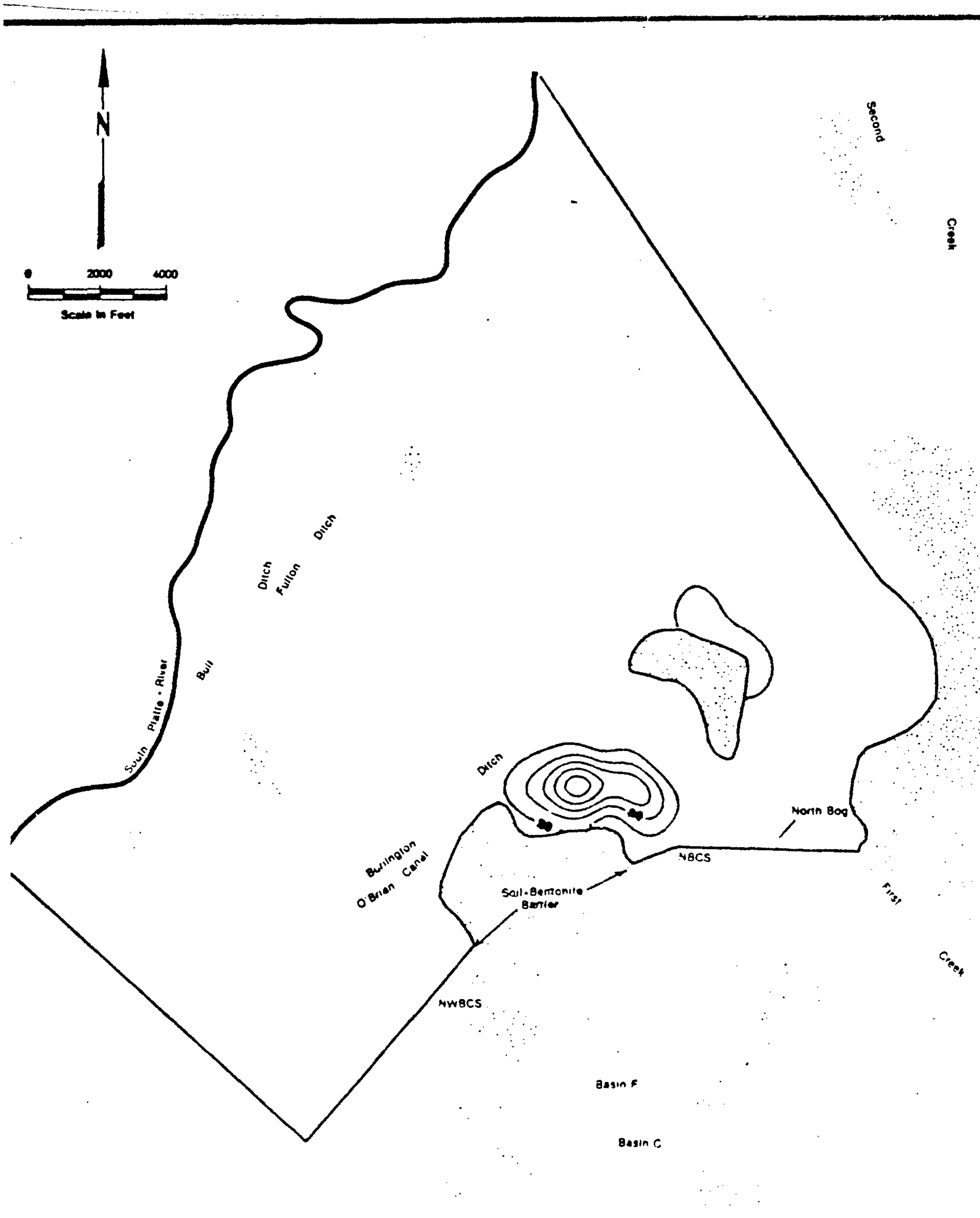
:gure G-19a
IMP CONCENTRATION DISTRIBUTION IN
:07 (20 YEARS) WITH EXISTING NEW SOUTH
DAMS COUNTY WELL FIELD, ALLUVIAL
QUIFER, CONTOUR INTERVAL (20-100 ug/l)

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



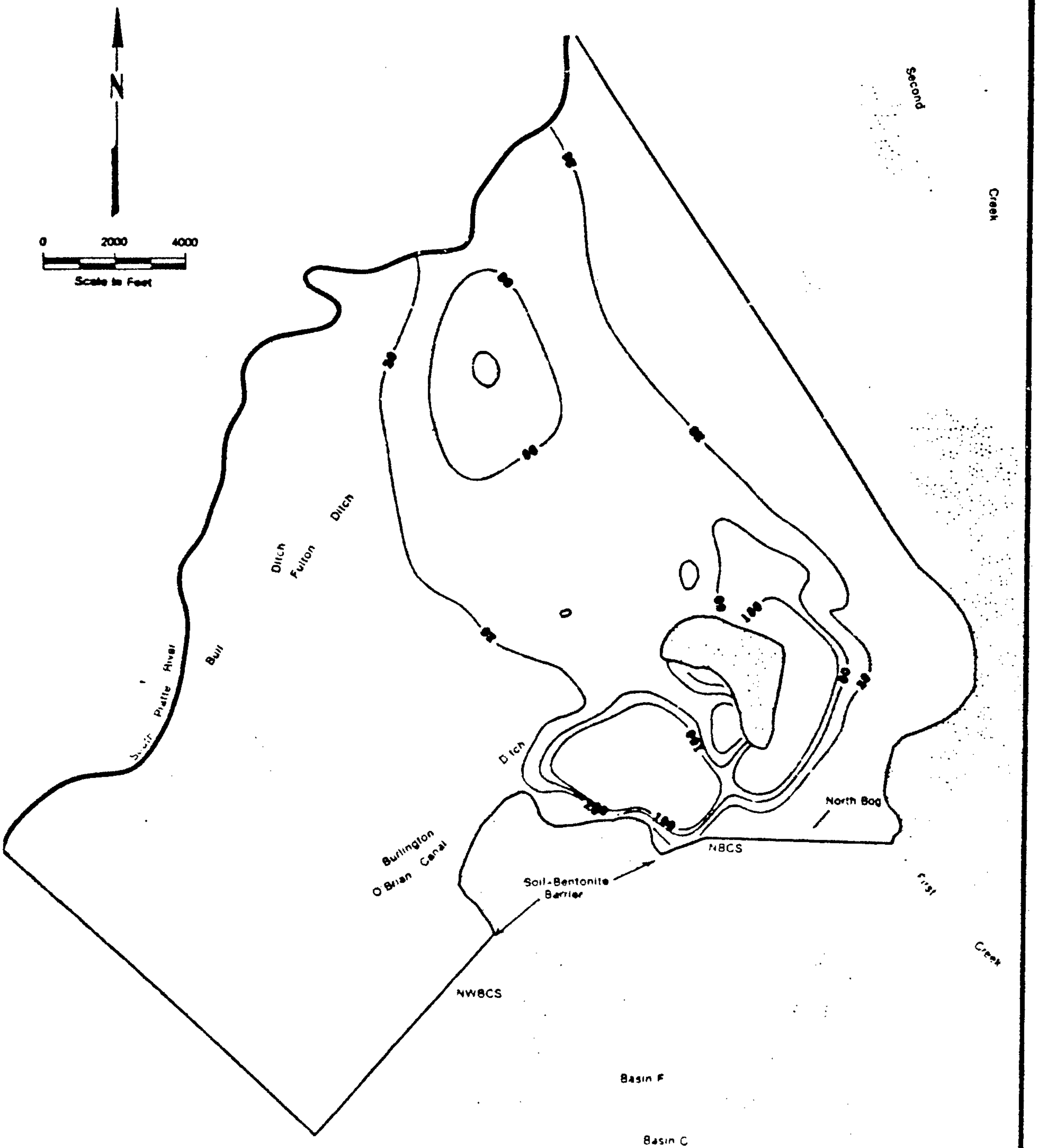
RCE: WARNER 1988

ure G-19b ɅP CONCENTRATION DISTRIBUTION IN ı7 (20 YEARS) WITH EXISTING NEW SOUTH AMS COUNTY WELL FIELD, ALLUVIAL UIFER, CONTOUR INTERVAL (20-100 ug/l)	**Prepared for:** **U.S. Army Program Manager's Office** **For Rocky Mountain Arsenal** **Aberdeen Proving Ground, Maryland**



RCE: WARNER, 1988

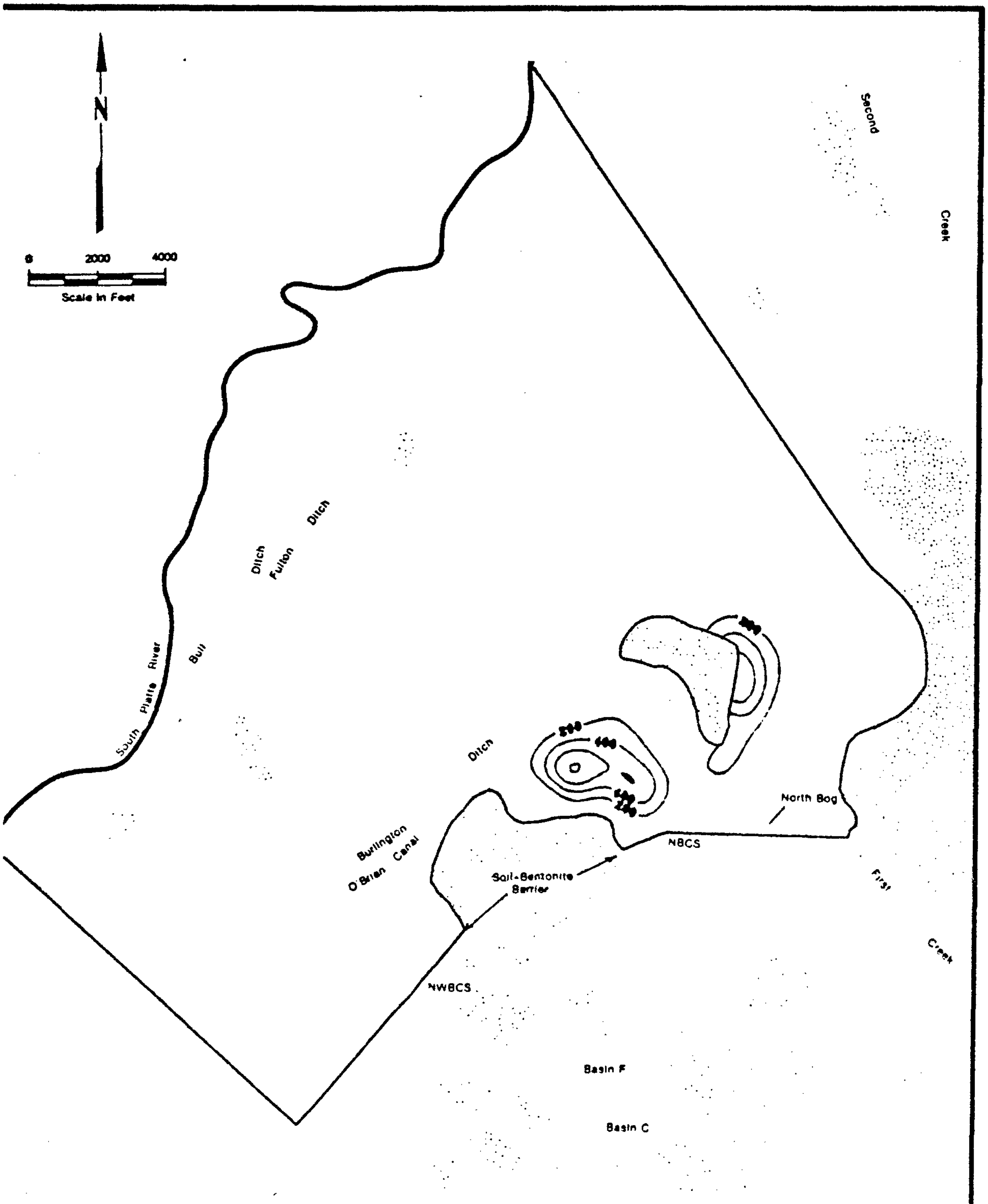
ure G-20 ΛP CONCENTRATION DISTRIBUTION IN 7 (30 YEARS) WITH EXISTING NEW SOUTH AMS COUNTY WELL FIELD, ALLUVIAL UIFER, CONTOUR INTERVAL (20-180 ug/l)	Prepared for: U.S. Army Program Manager's Office For Rocky Mountain Arsenal Aberdeen Proving Ground, Maryland



URCE: WARNER, 1988

jure G-21a
ΜP CONCENTRATION DISTRIBUTION IN
92 (5 YEARS) FOR PROPOSED SOUTH
)AMS COUNTY WELL FIELD, ALLUVIAL
)UIFER, CONTOUR INTERVAL (20-100 ug/l)

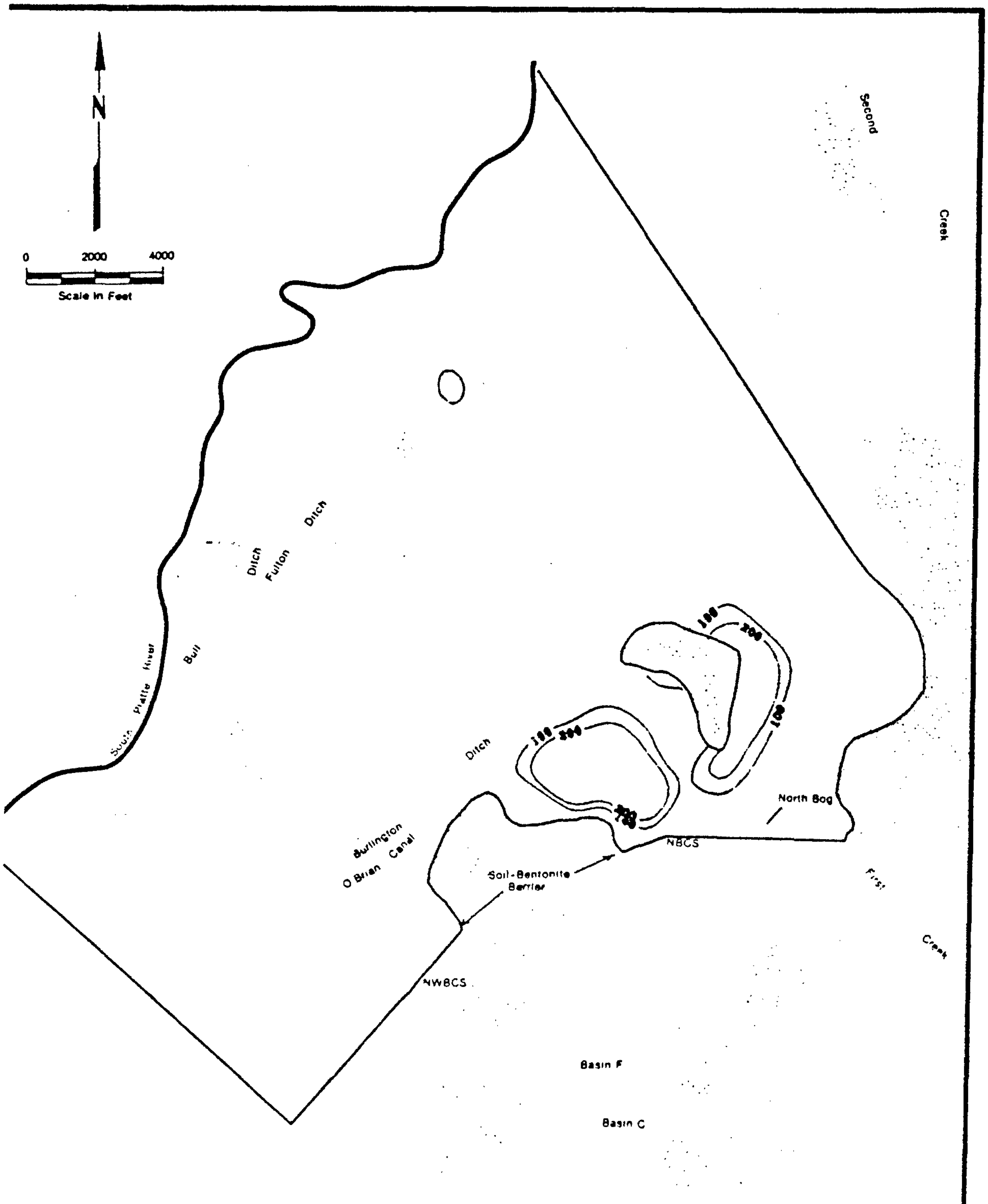
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



RCE: WARNER, 1988

ure G-21b
ɅP CONCENTRATION DISTRIBUTION IN
2 (5 YEARS) FOR PROPOSED SOUTH
AMS COUNTY WELL FIELD, ALLUVIAL
UIFER, CONTOUR INTERVAL (200-800 ug/l)

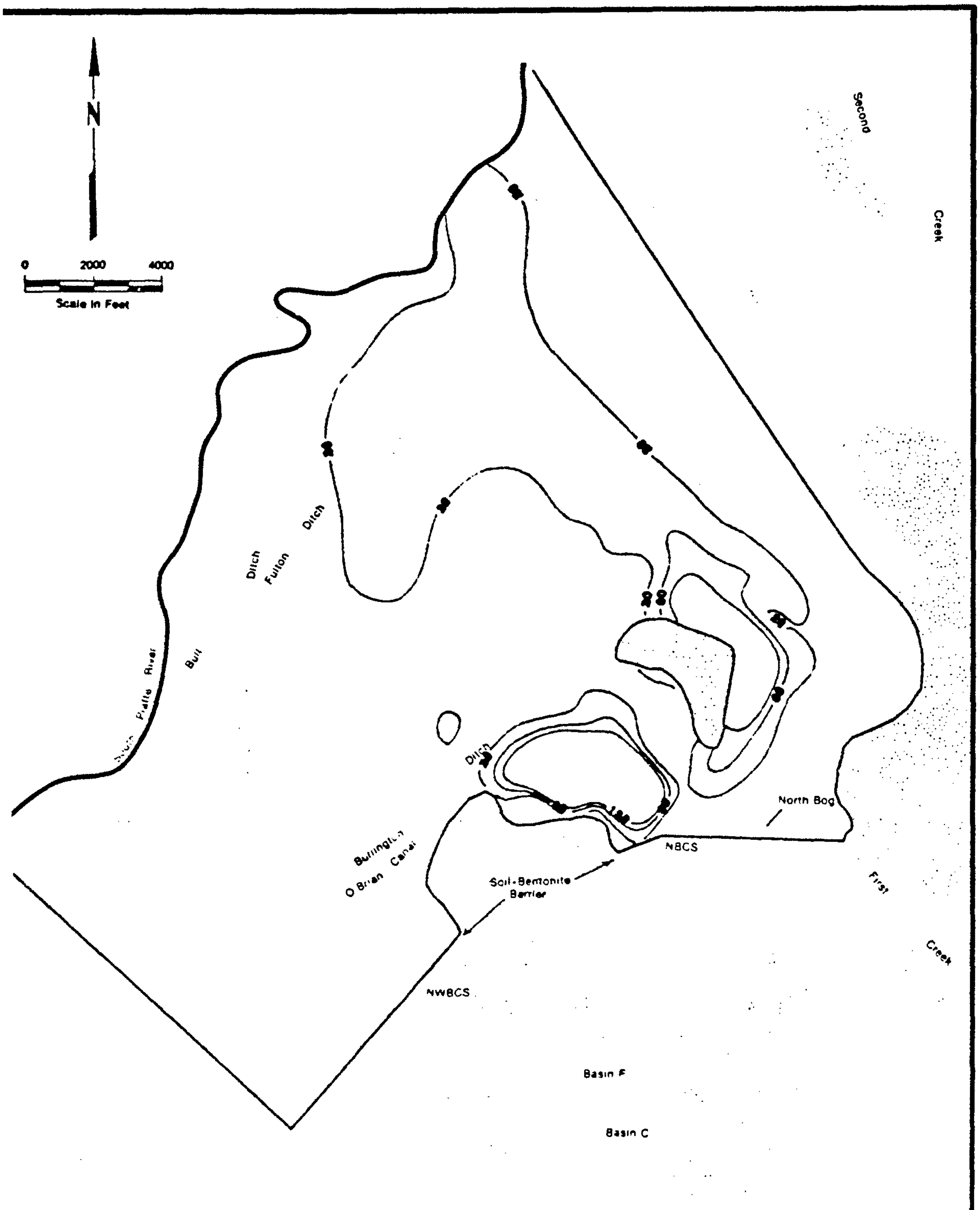
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



CE WARNER, 1988

ıre G-21c
P CONCENTRATION DISTRIBUTION IN
: (5 YEARS) FOR PROPOSED SOUTH
MS COUNTY WELL FIELD, ALLUVIAL
IFER, CONTOUR INTERVAL (100-200 ug/l)

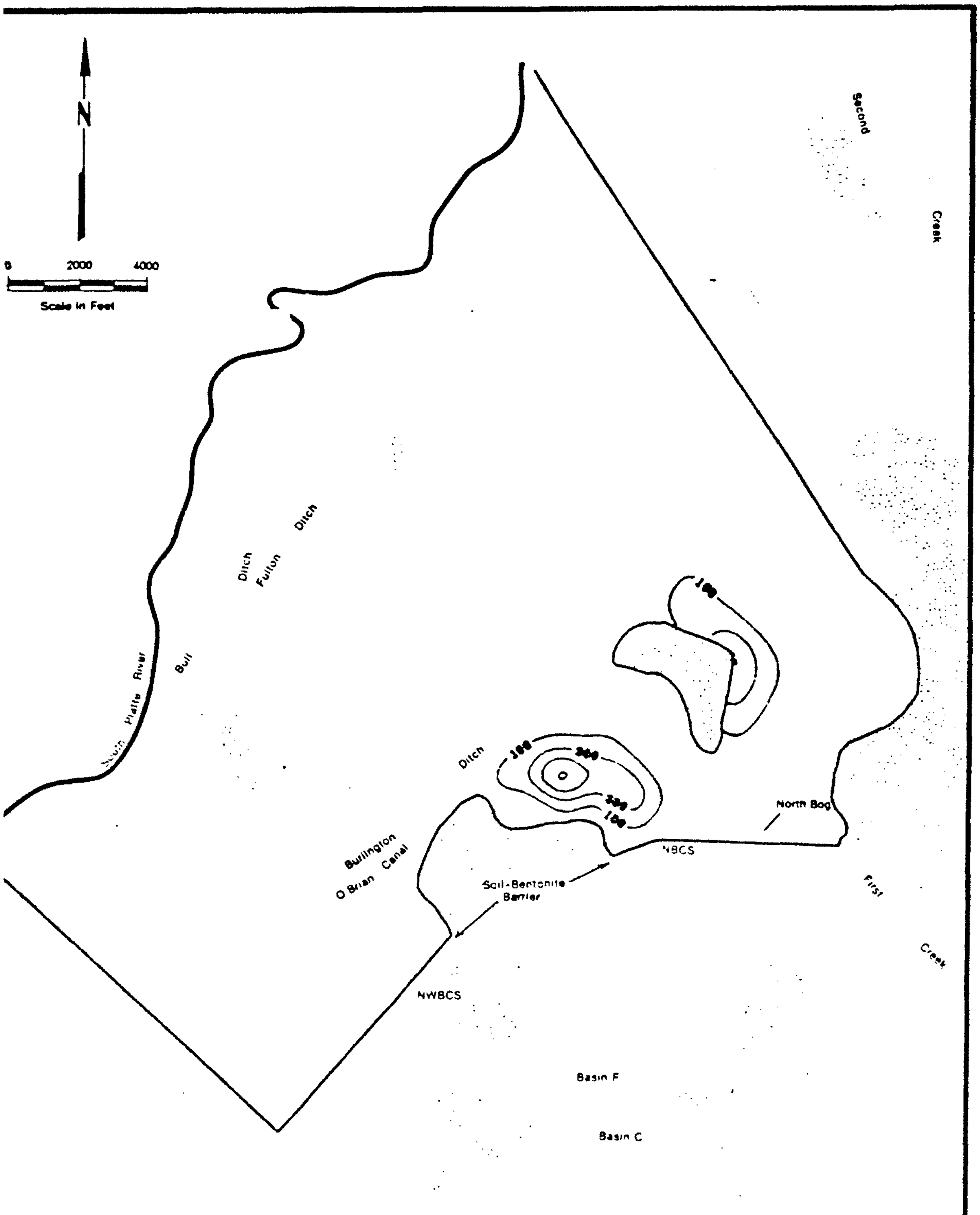
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:E: WARNER, 1988

re G-22a
P CONCENTRATION DISTRIBUTION IN
(10 YEARS) FOR PROPOSED SOUTH
MS COUNTY WELL FIELD, ALLUVIAL
IFER, CONTOUR INTERVAL (20-100 ug/l)

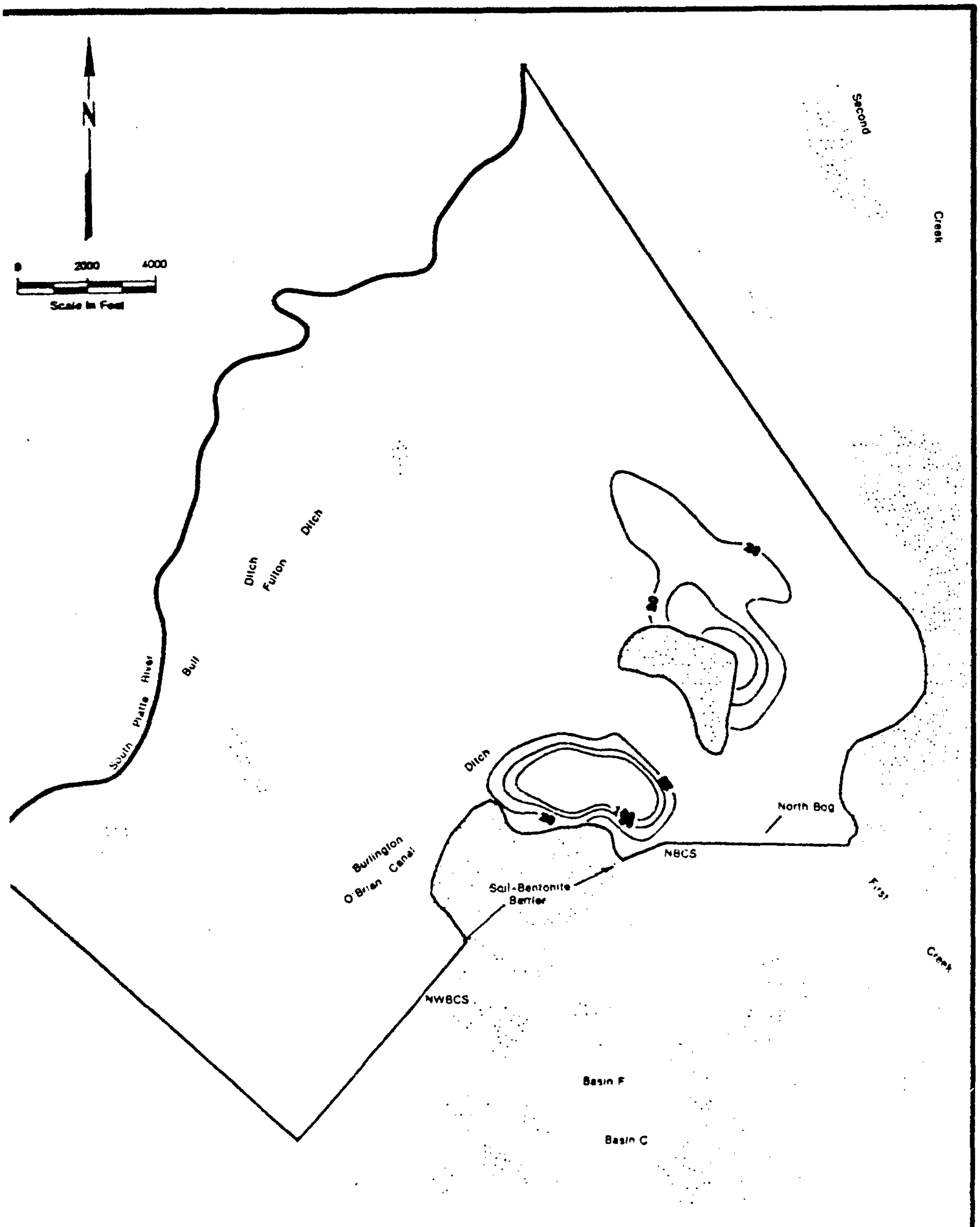
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:E: WARNER, 1988

re G-22b
ᑭ CONCENTRATION DISTRIBUTION IN
(10 YEARS) FOR PROPOSED SOUTH
MS COUNTY WELL FIELD, ALLUVIAL
IFER, CONTOUR INTERVAL (100-700 ug/l)

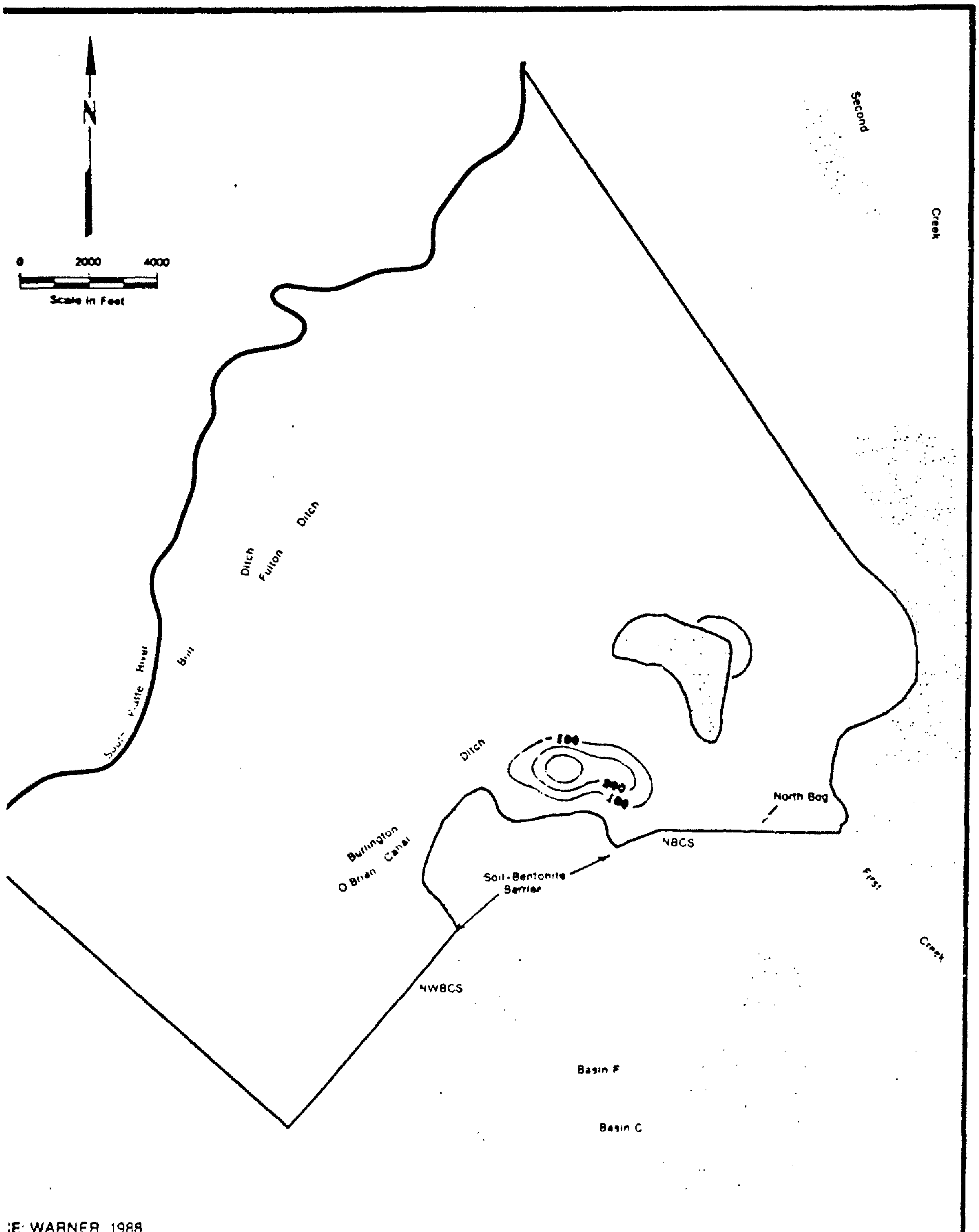
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:E: WARNER, 1988

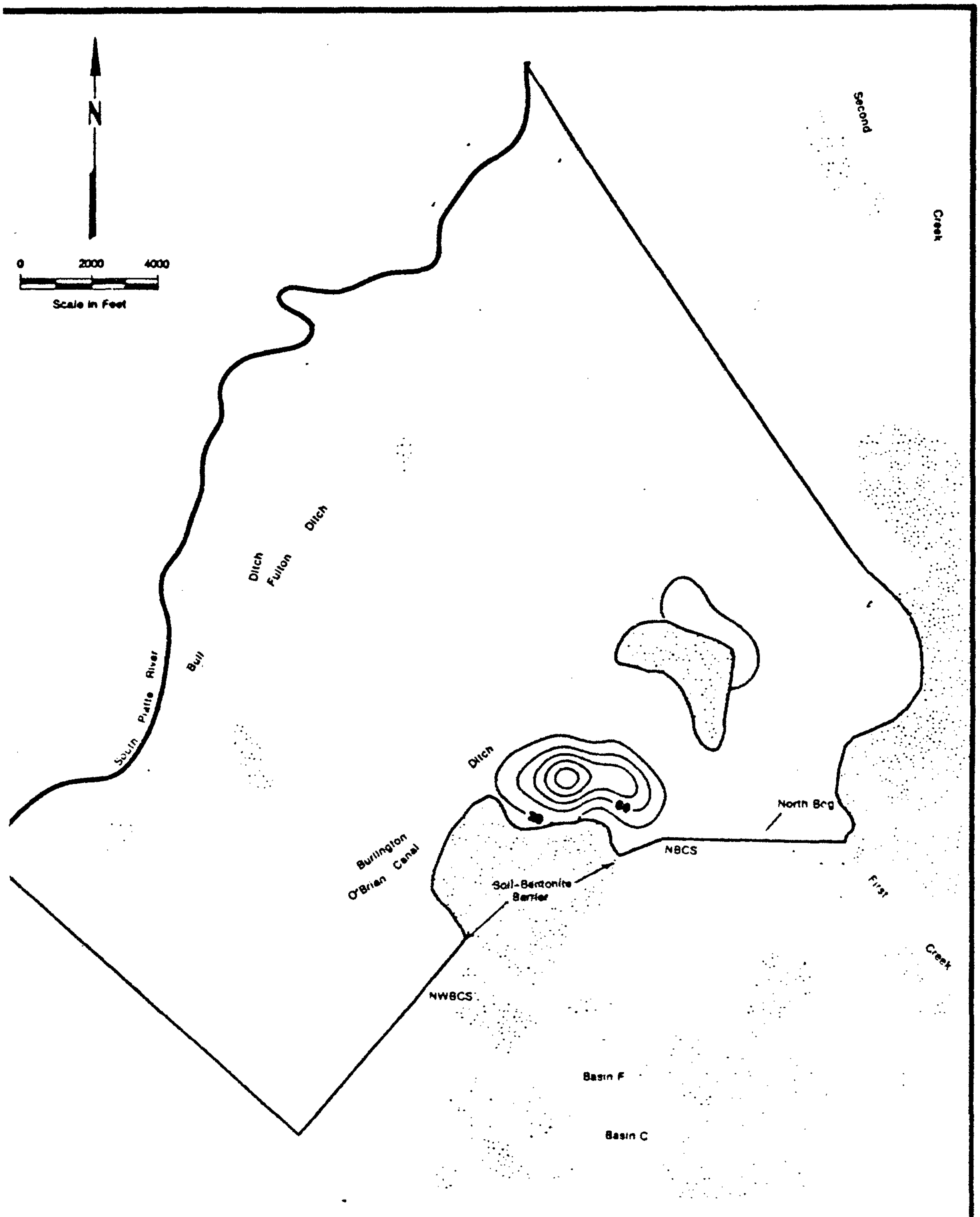
re G-23a
ᵓ CONCENTRATION DISTRIBUTION IN (20 YEARS) FOR PROPOSED SOUTH MS COUNTY WELL FIELD, ALLUVIAL IFER, CONTOUR INTERVAL (20-100 ug/l)

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:E: WARNER, 1988

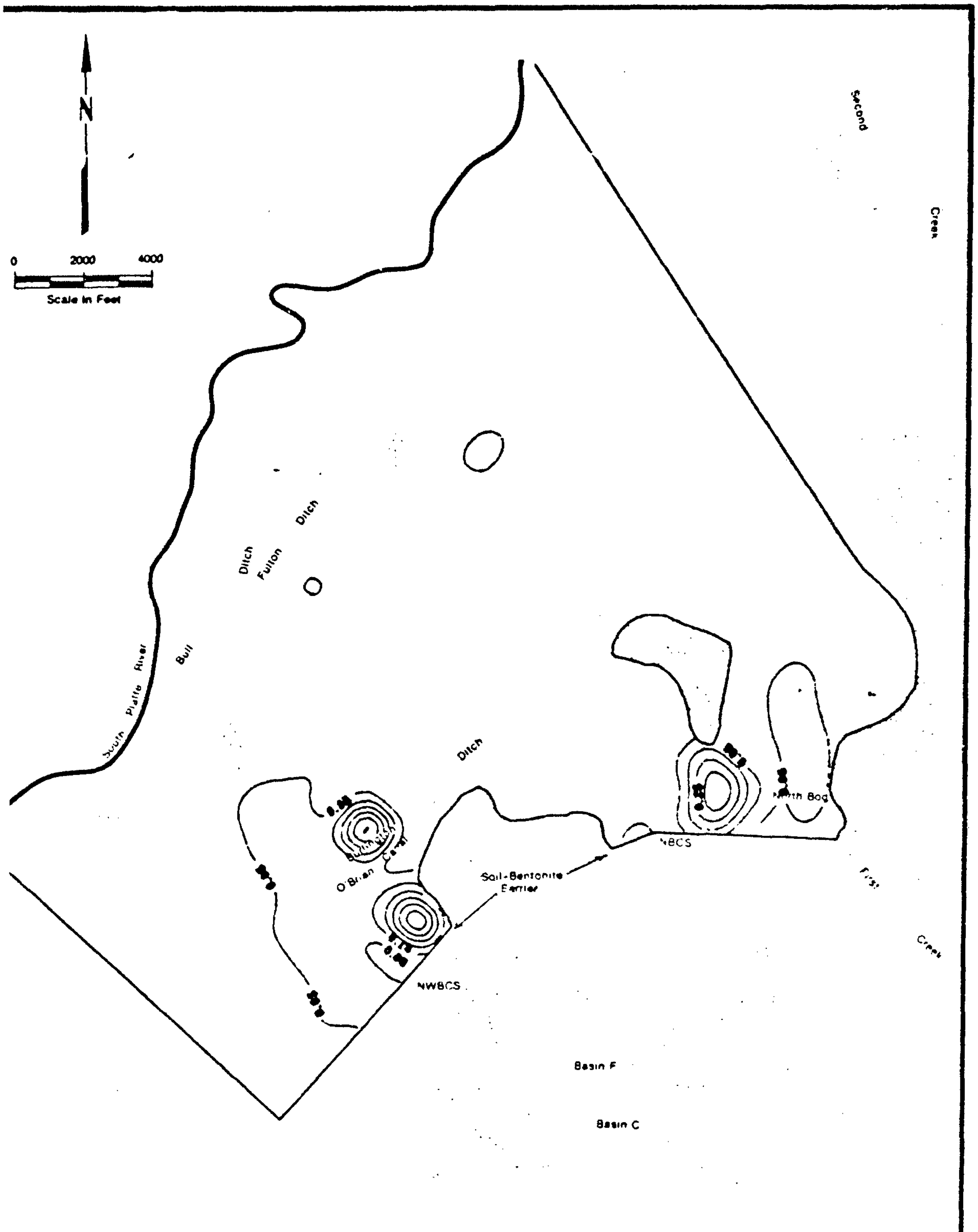
e G-23b ' CONCENTRATION DISTRIBUTION IN (20 YEARS) FOR PROPOSED SOUTH ʌIS COUNTY WELL FIELD, ALLUVIAL FER, CONTOUR INTERVAL (100-300 ug/l)	**Prepared for:** **U.S. Army Program Manager's Office** **For Rocky Mountain Arsenal** **Aberdeen Proving Ground, Maryland**



CE: WARNER, 1988

ıre G-24
P CONCENTRATION DISTRIBUTION IN
' (30 YEARS) FOR PROPOSED SOUTH
.MS COUNTY WELL FIELD, ALLUVIAL
ıIFER, CONTOUR INTERVAL (20-180 ug/l)

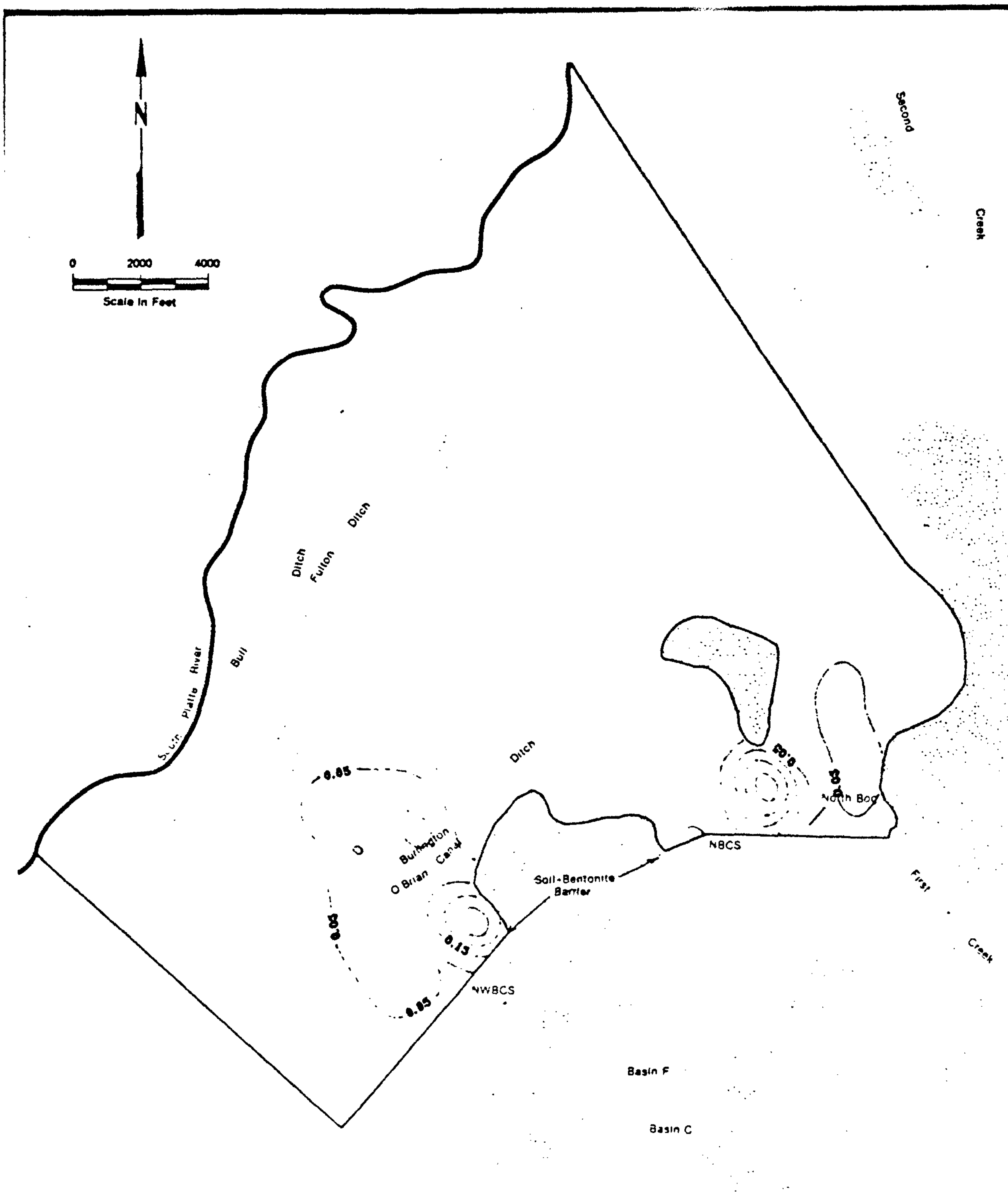
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



'e G-25

DRIN CONCENTRATION DISTRIBUTION
1987, ALLUVIAL AQUIFER
E: WARNER, 1988

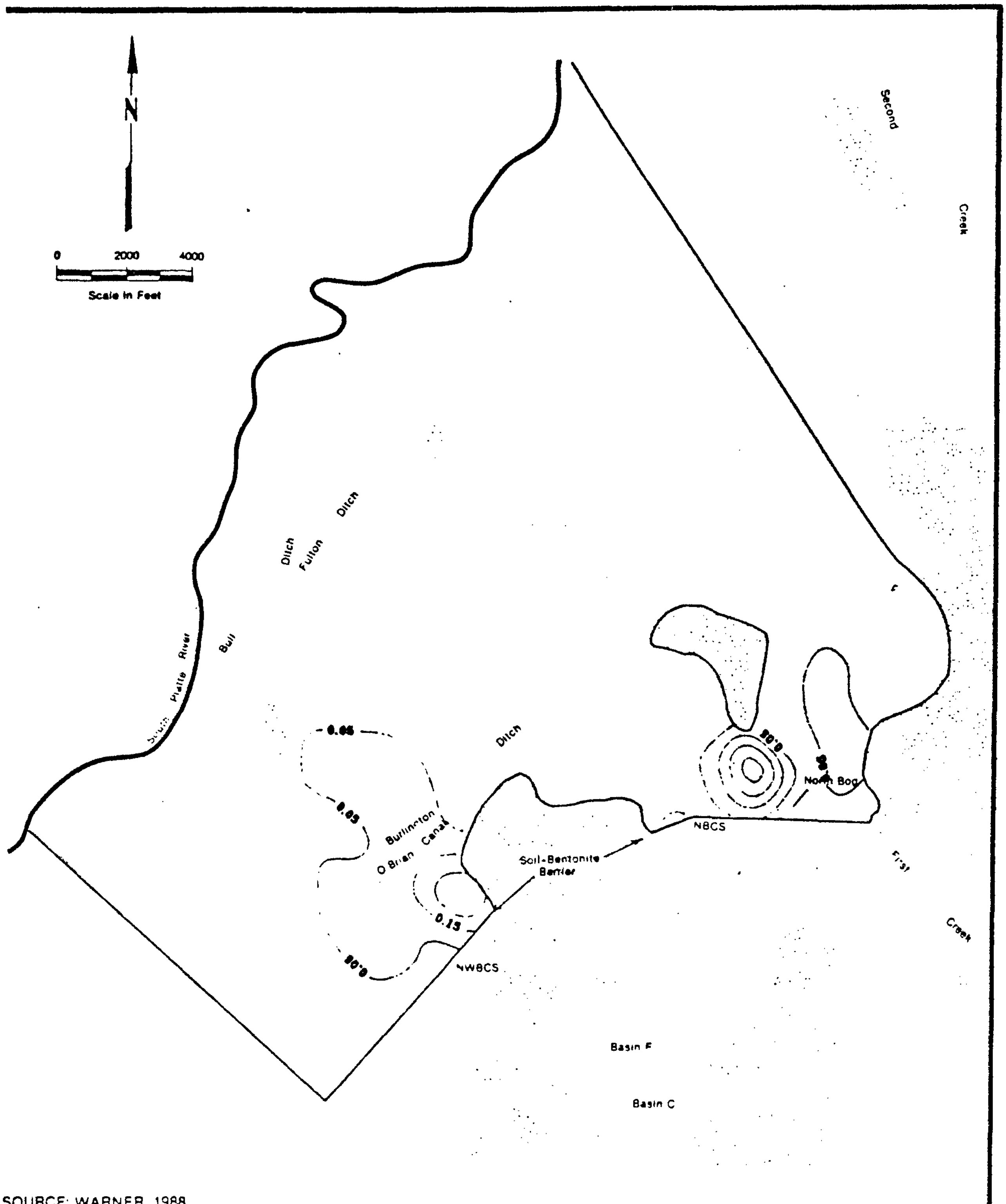
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



SOURCE: WARNER, 1988

Figure G-26
DIELDRIN CONCENTRATION DISTRIBUTION (ug/l) IN 1992 (5 YEARS) WITH EXISTING NORTH BOUNDARY RECHARGE OPERATIONS, ALLUVIAL AQUIFER

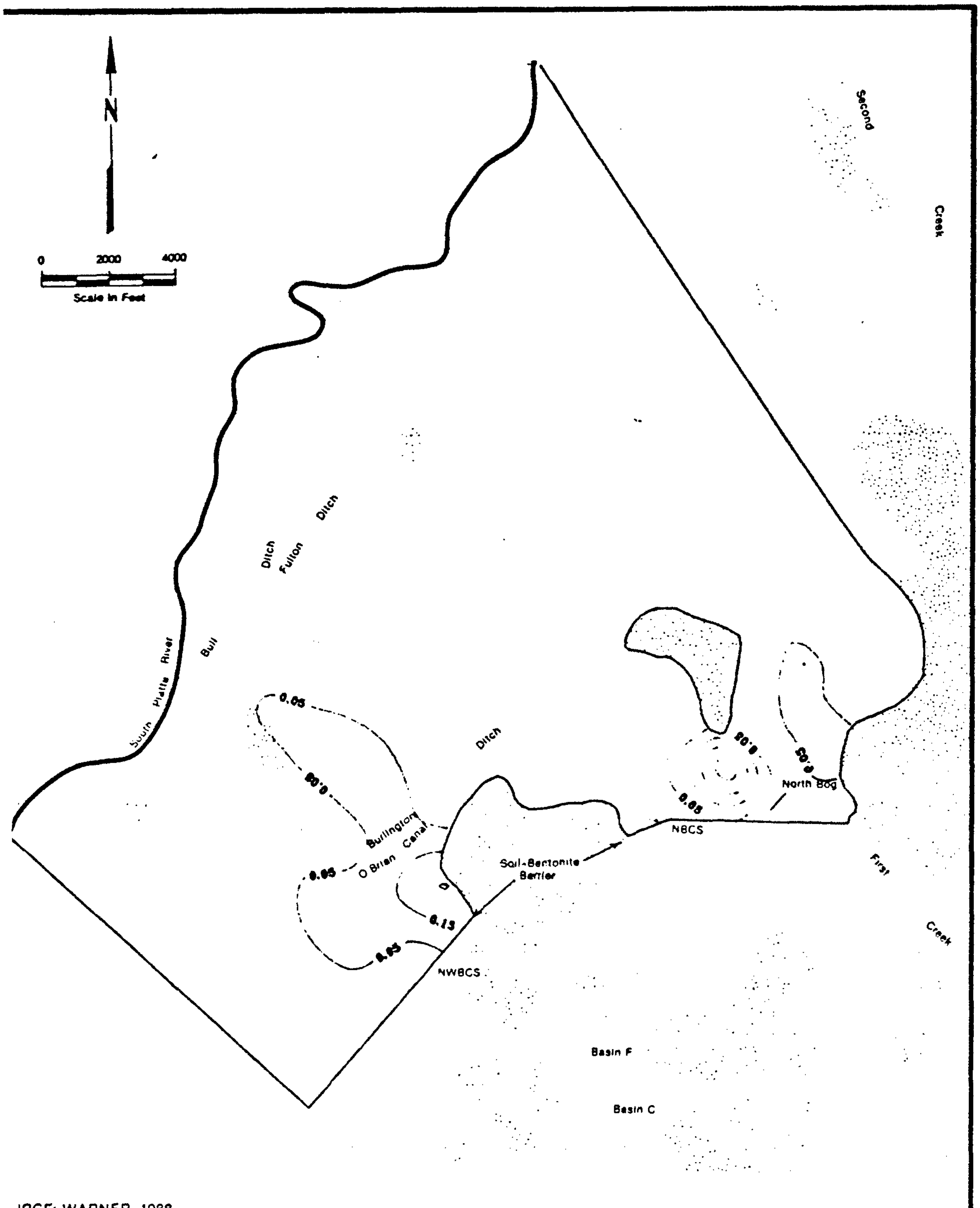
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



SOURCE: WARNER, 1988

Figure G-27
DIELDRIN CONCENTRATION DISTRIBUTION (ug/l) IN 1997 (10 YEARS) WITH EXISTING NORTH BOUNDARY RECHARGE OPERATIONS, ALLUVIAL AQUIFER

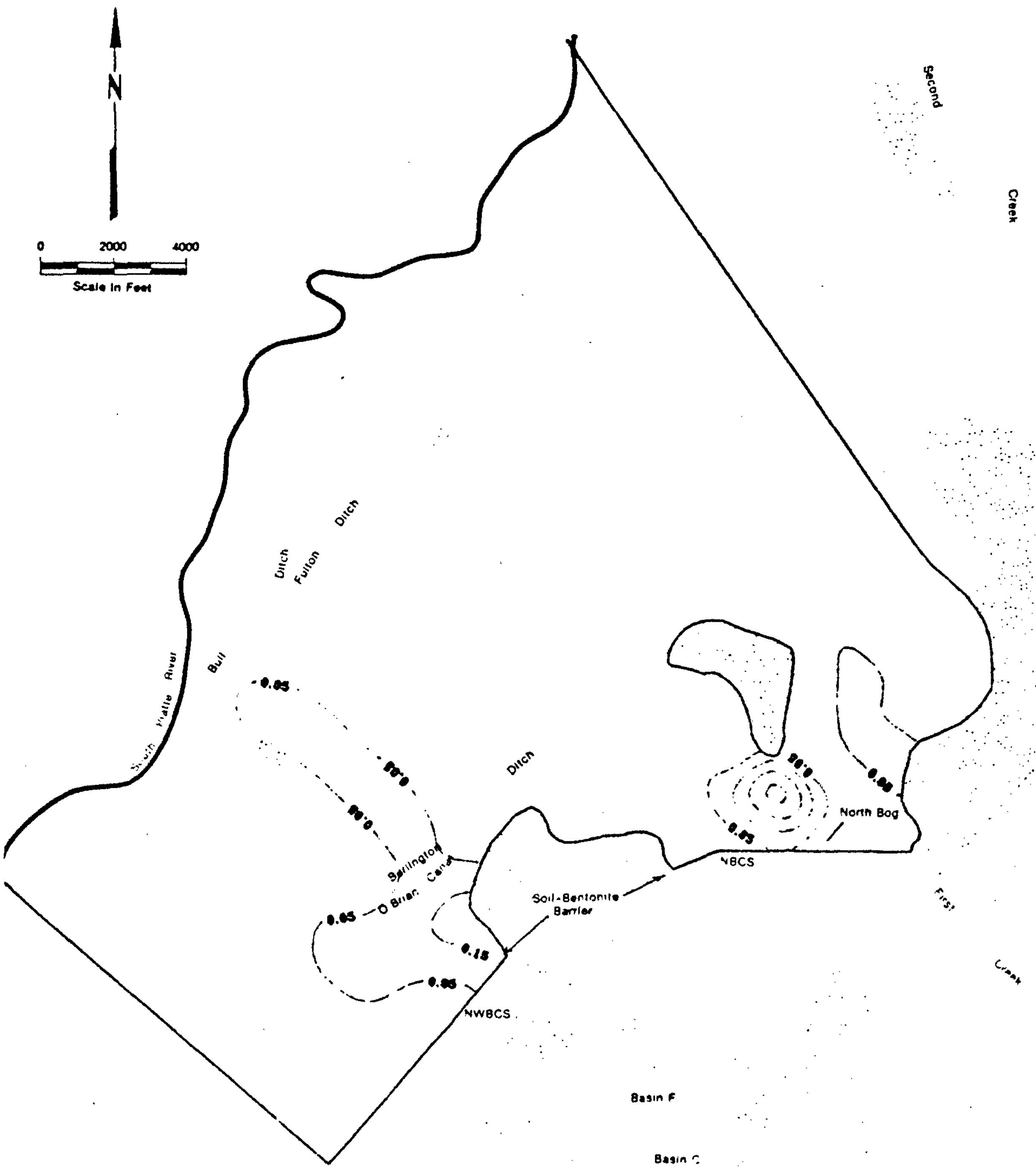
Prepared for:
U.S. Army Program Manager's Office For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



JRCE: WARNER, 1988

jure G-28
ELDRIN CONCENTRATION DISTRIBUTION
J/l) IN 2007 (20 YEARS) WITH EXISTING
)RTH BOUNDARY RECHARGE
'ERATIONS, ALLUVIAL AQUIFER

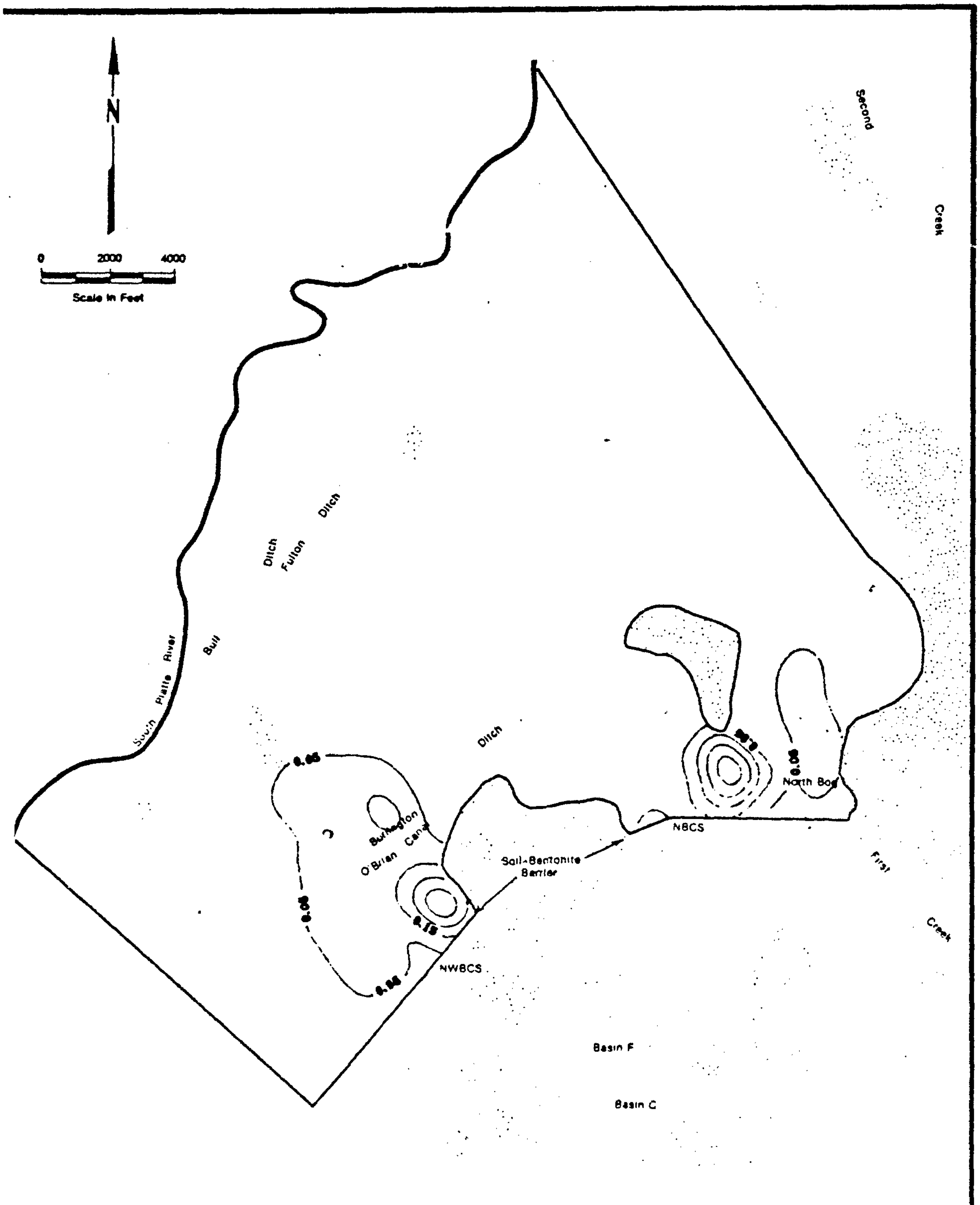
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



RCE: WARNER, 1988

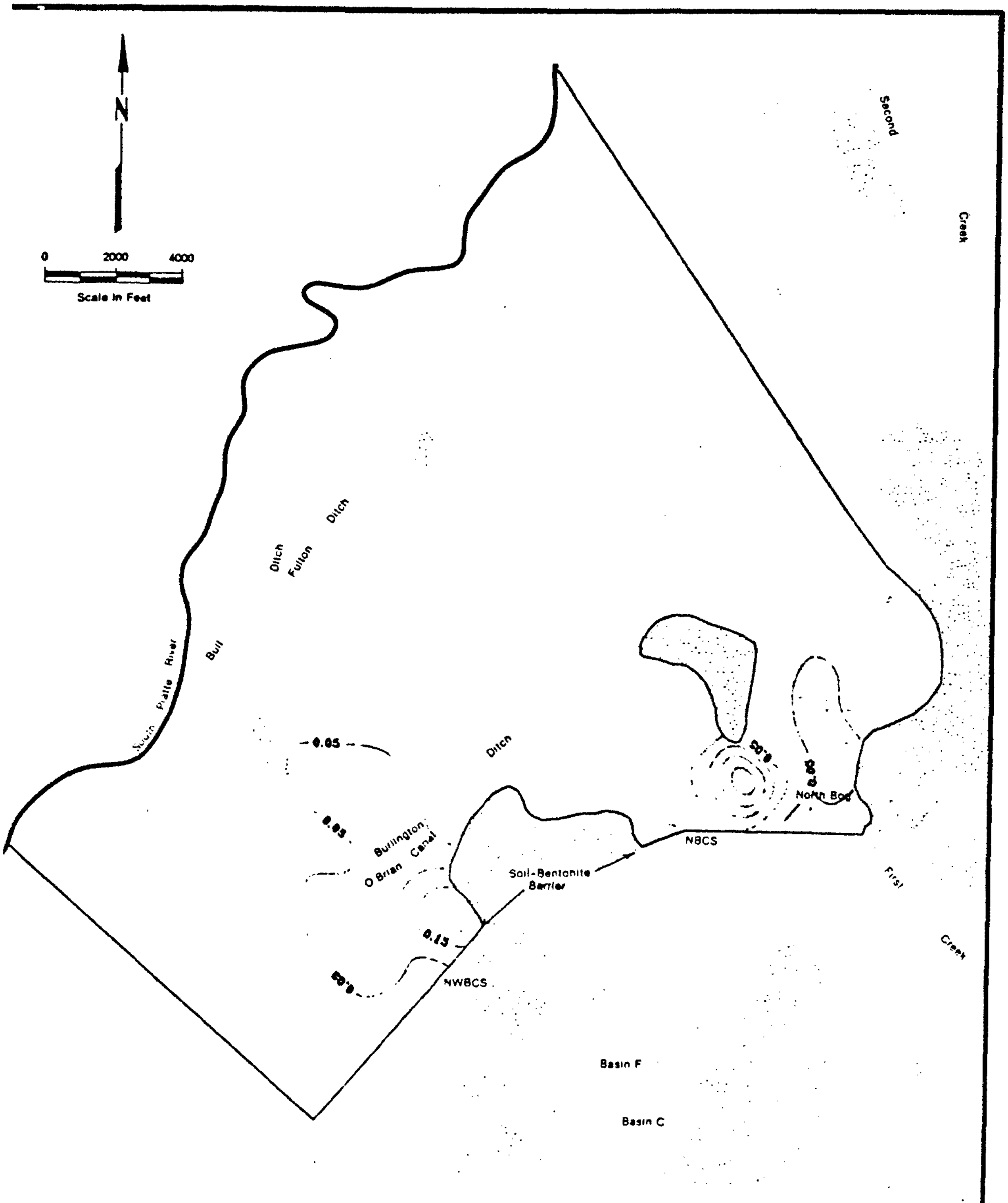
ure G-29
:LDRIN CONCENTRATION DISTRIBUTION
/l) IN 2017 (30 YEARS) WITH EXISTING
RTH BOUNDARY RECHARGE
ERATIONS, ALLUVIAL AQUIFER

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



ure G-30
LDRIN CONCENTRATION DISTRIBUTION (ug/l) IN
2 (5 YEARS) WITH EXISTING NORTH BOUNDARY
CHARGE OPERATION FOR NATURAL FLOW CONDI-
NS, ALLUVIAL AQUIFER
RCE: WARNER, 1988

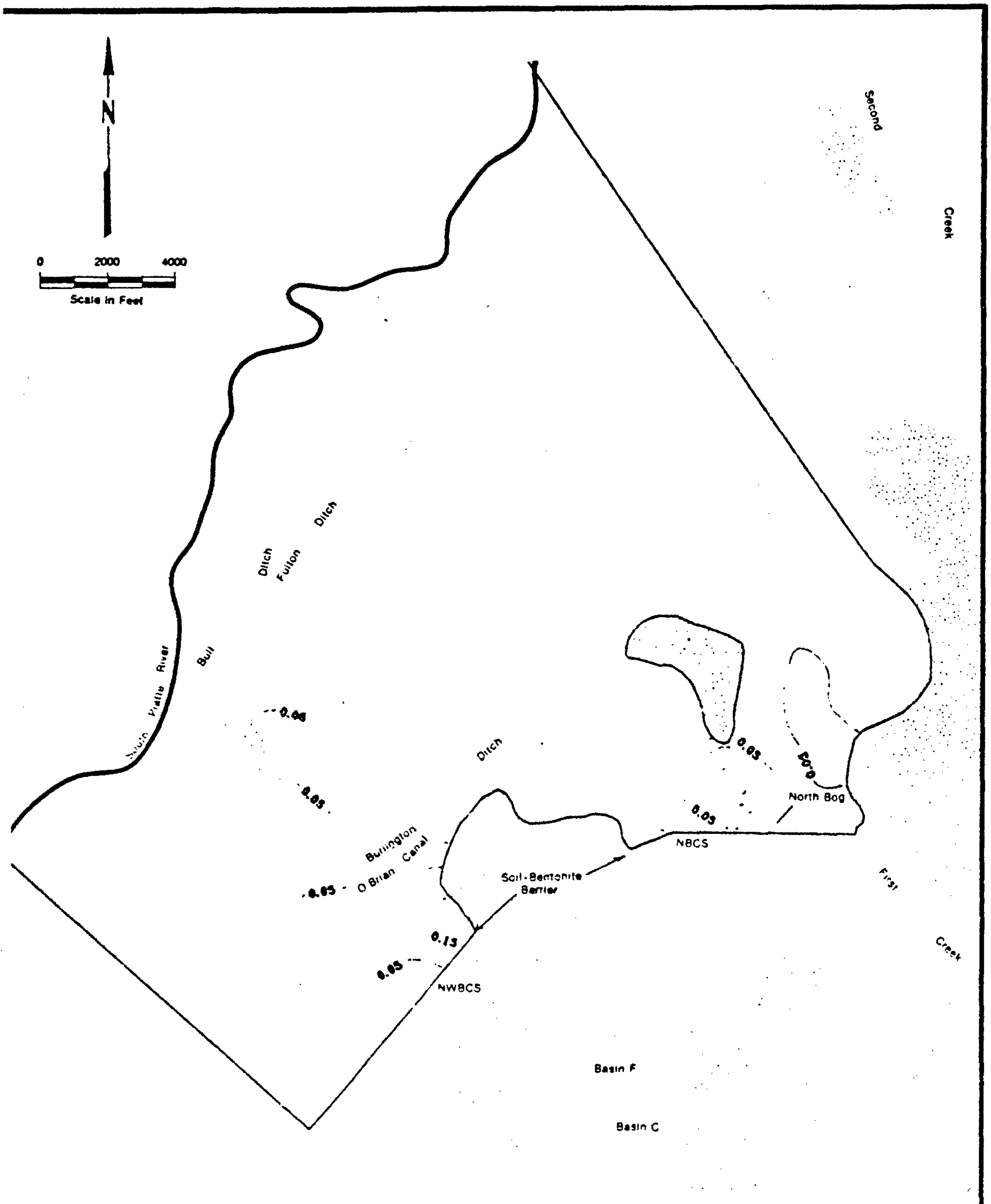
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



OURCE: WARNER, 1988

igure G-31
IELDRIN CONCENTRATION DISTRIBUTION (ug/l) IN
997 (10 YEARS) WITH NORTH
OUNDARY RECHARGE OPERATION FOR NATURAL
LOW CONDITIONS, ALLUVIAL AQUIFER

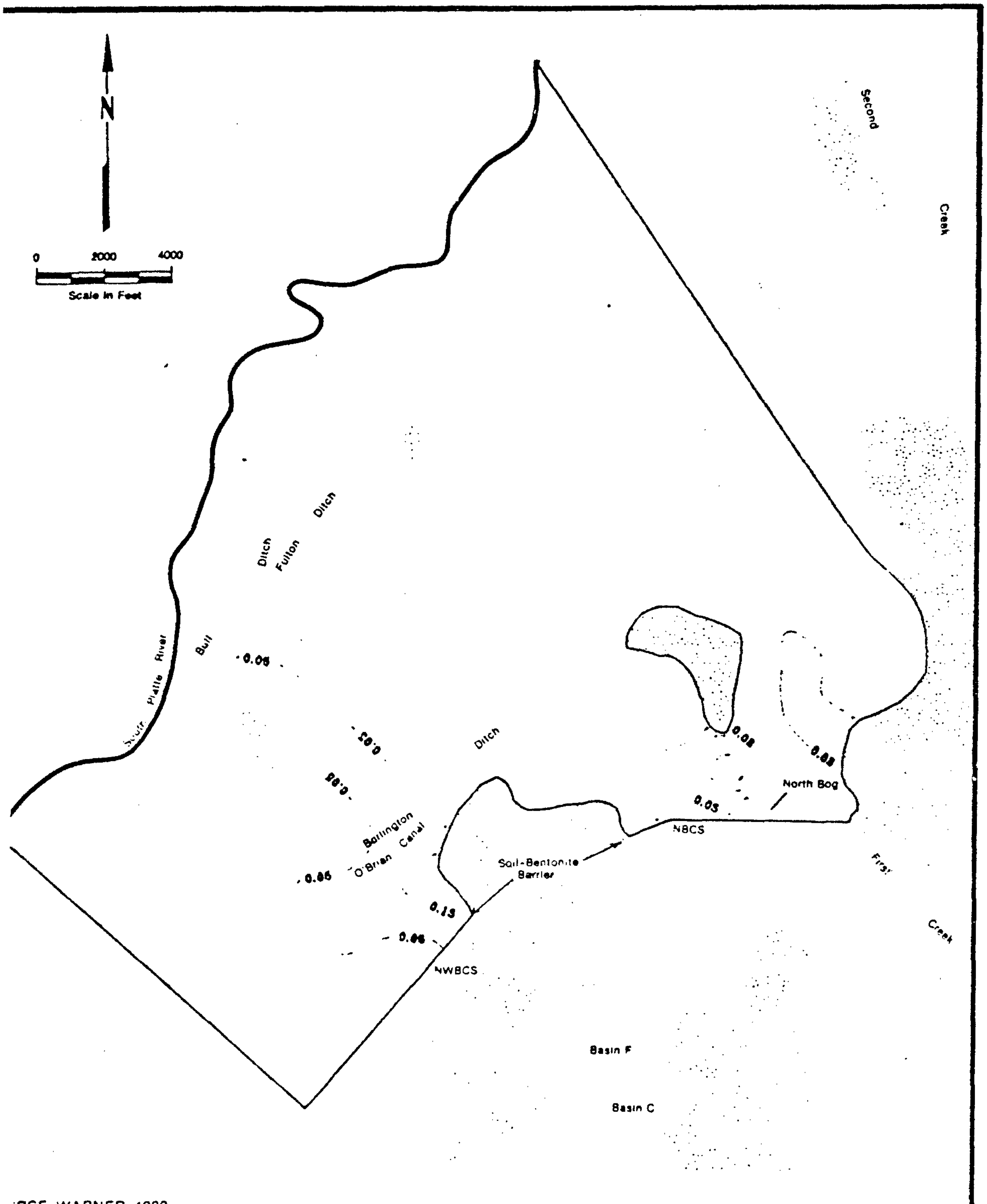
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



JRCE: WARNER, 1988

jure G-32
:LDRIN CONCENTRATION DISTRIBUTION (ug/l) IN
7 (20 YEARS) WITH NORTH
UNDARY RECHARGE OPERATION FOR NATURAL
)W CONDITIONS, ALLUVIAL AQUIFER

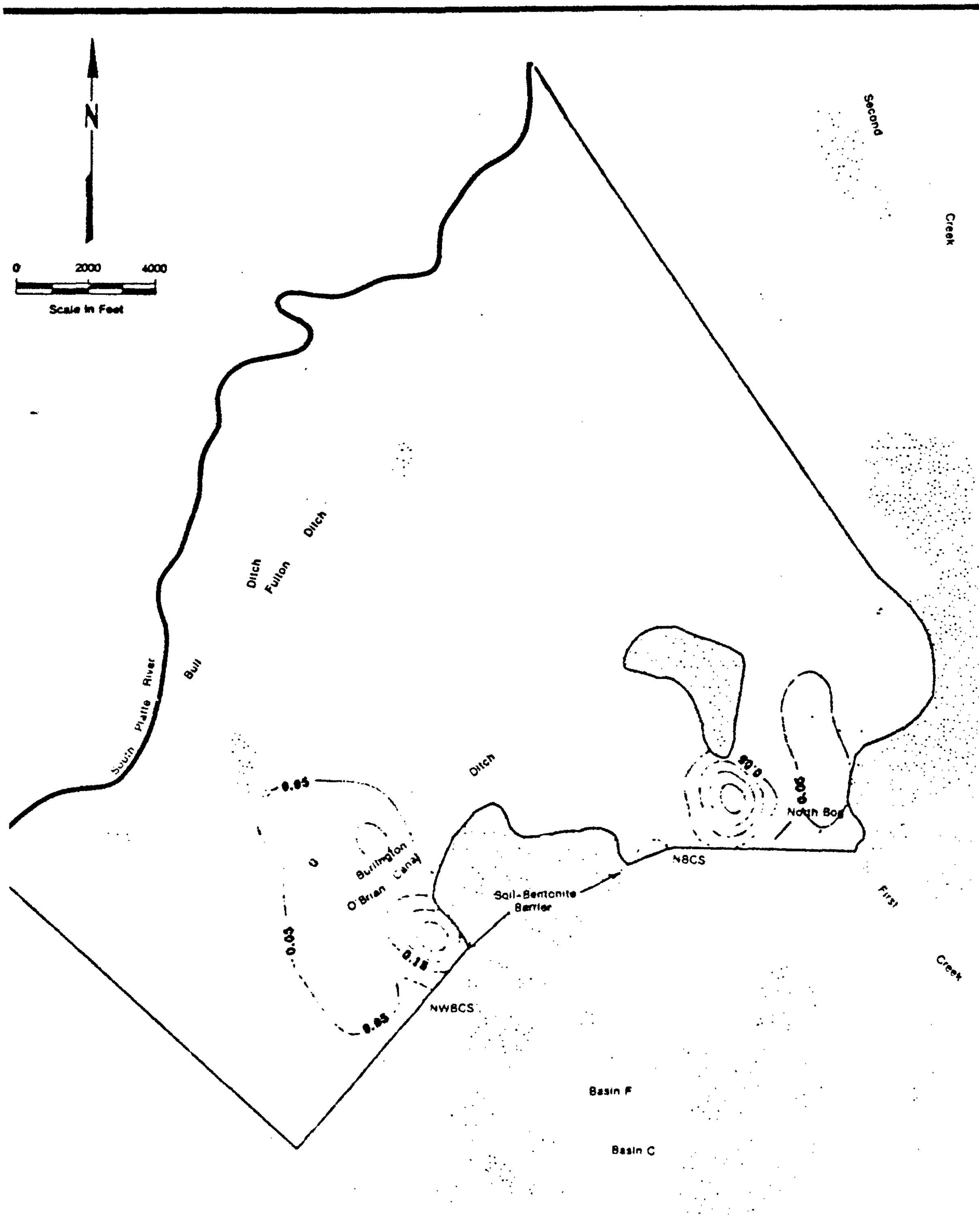
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



'RCE. WARNER, 1988

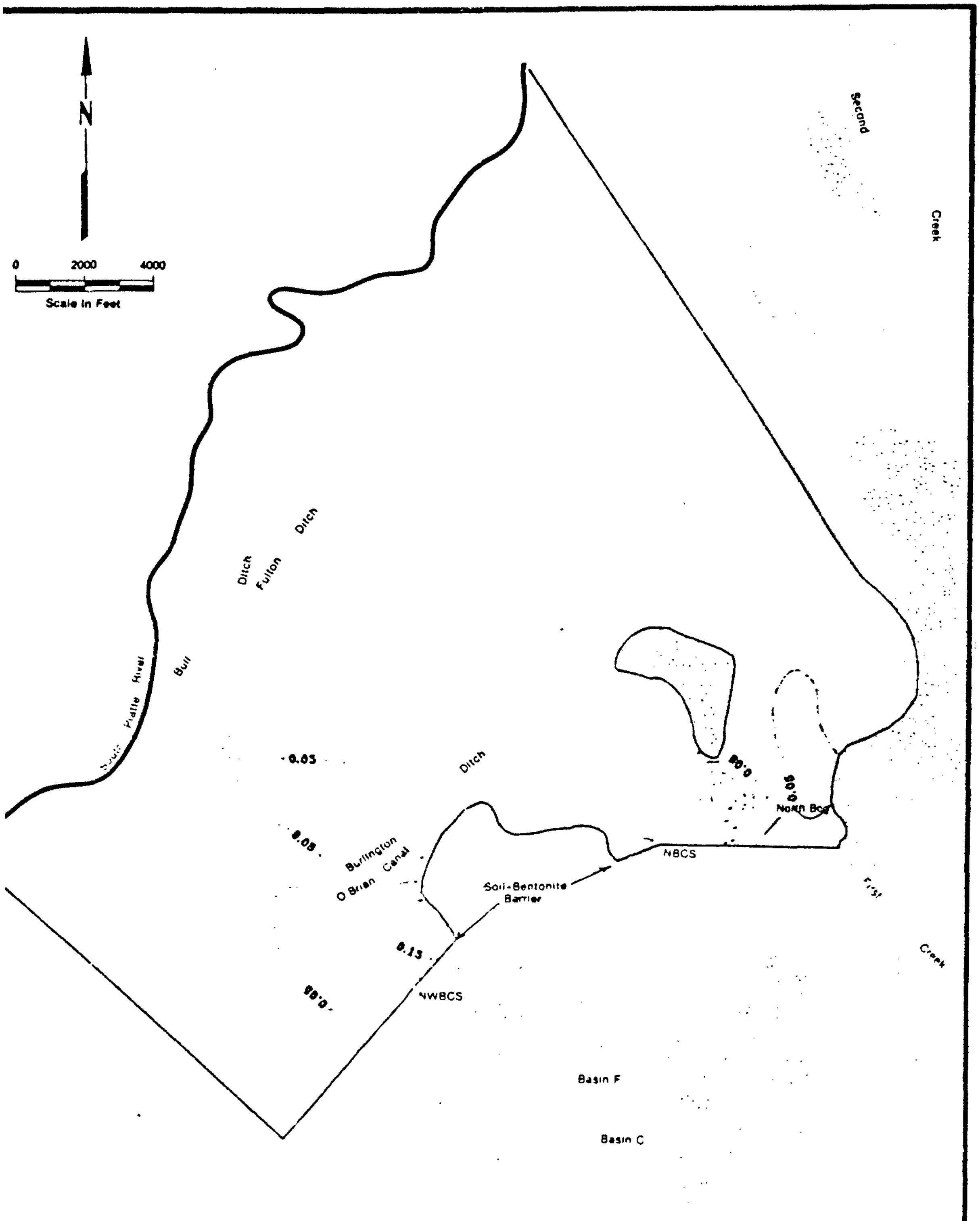
ure G-33
:LDRIN CONCENTRATION DISTRIBUTION
/I) IN 2017 (30 YEARS) WITH NORTH
UNDARY RECHARGE OPERATION FOR
TURAL FLOW CONDITIONS, ALLUVIAL
'UIFER

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:CE: WARNER, 1988

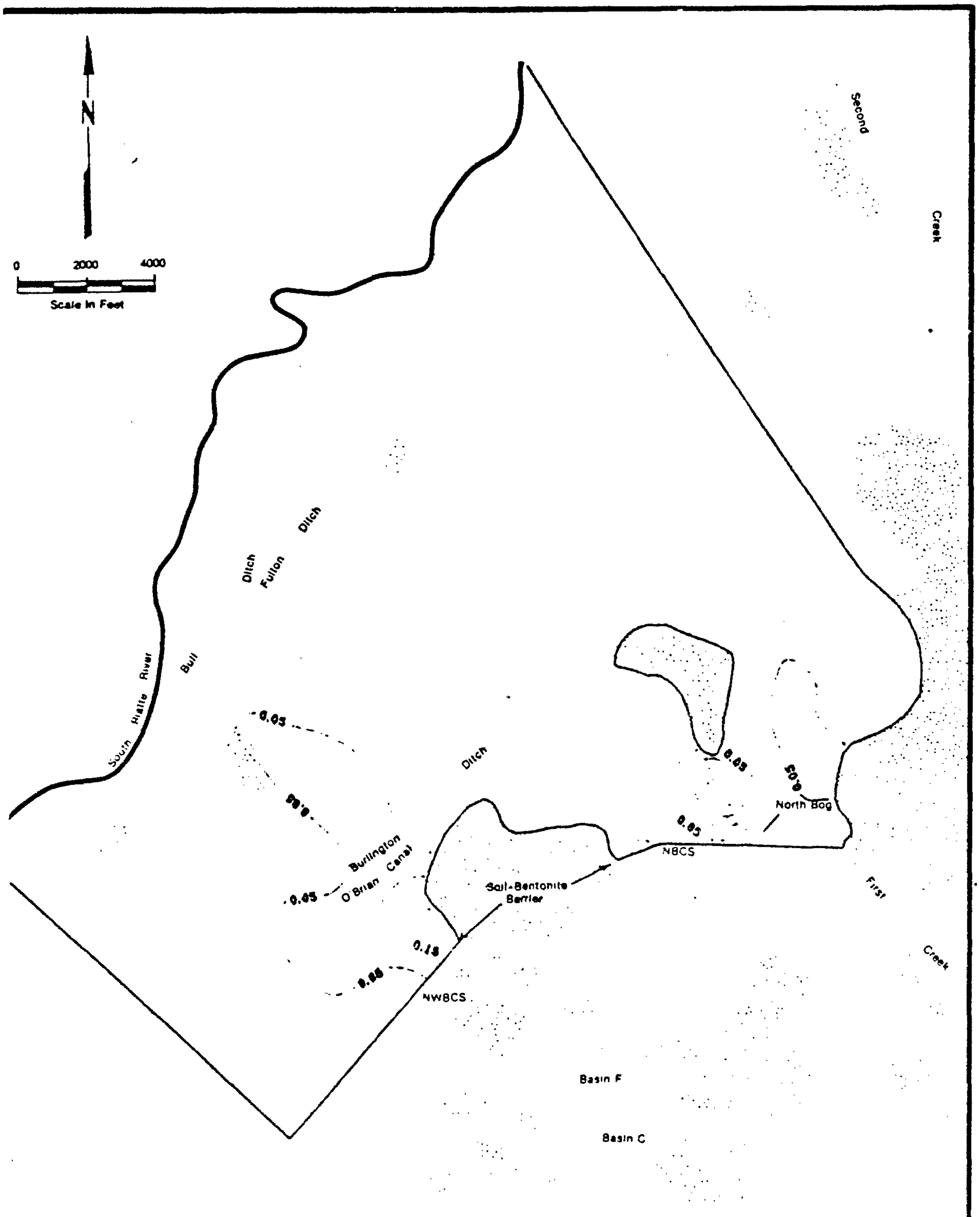
ure G-34 LDRIN CONCENTRATION DISTRIBUTION l) IN 1992 (5 YEARS) WITH EXISTING NEW JTH ADAMS COUNTY WELL FIELD, UVIAL AQUIFER	**Prepared for:** **U.S. Army Program Manager's Office** **For Rocky Mountain Arsenal** **Aberdeen Proving Ground, Maryland**



:E: WARNER, 1988

re G-35
DRIN CONCENTRATION DISTRIBUTION
IN 1997 (10 YEARS) WITH EXISTING
' SOUTH ADAMS COUNTY WELL FIELD,
JVIAL AQUIFER

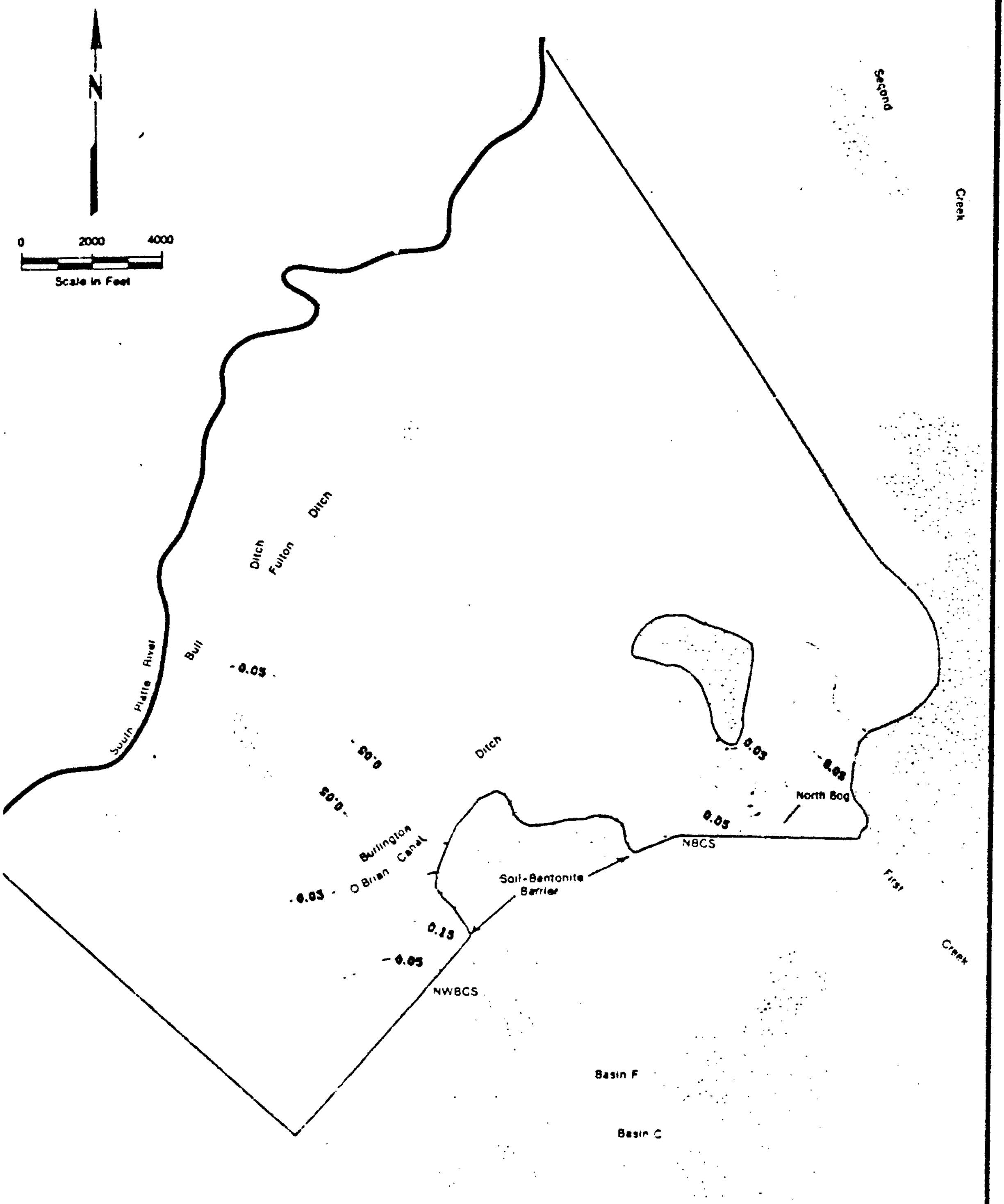
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



CE: WARNER, 1988

re G-36
.DRIN CONCENTRATION DISTRIBUTION
) IN 2007 (20 YEARS) WITH EXISTING
/ SOUTH ADAMS COUNTY WELL FIELD,
JVIAL AQUIFER

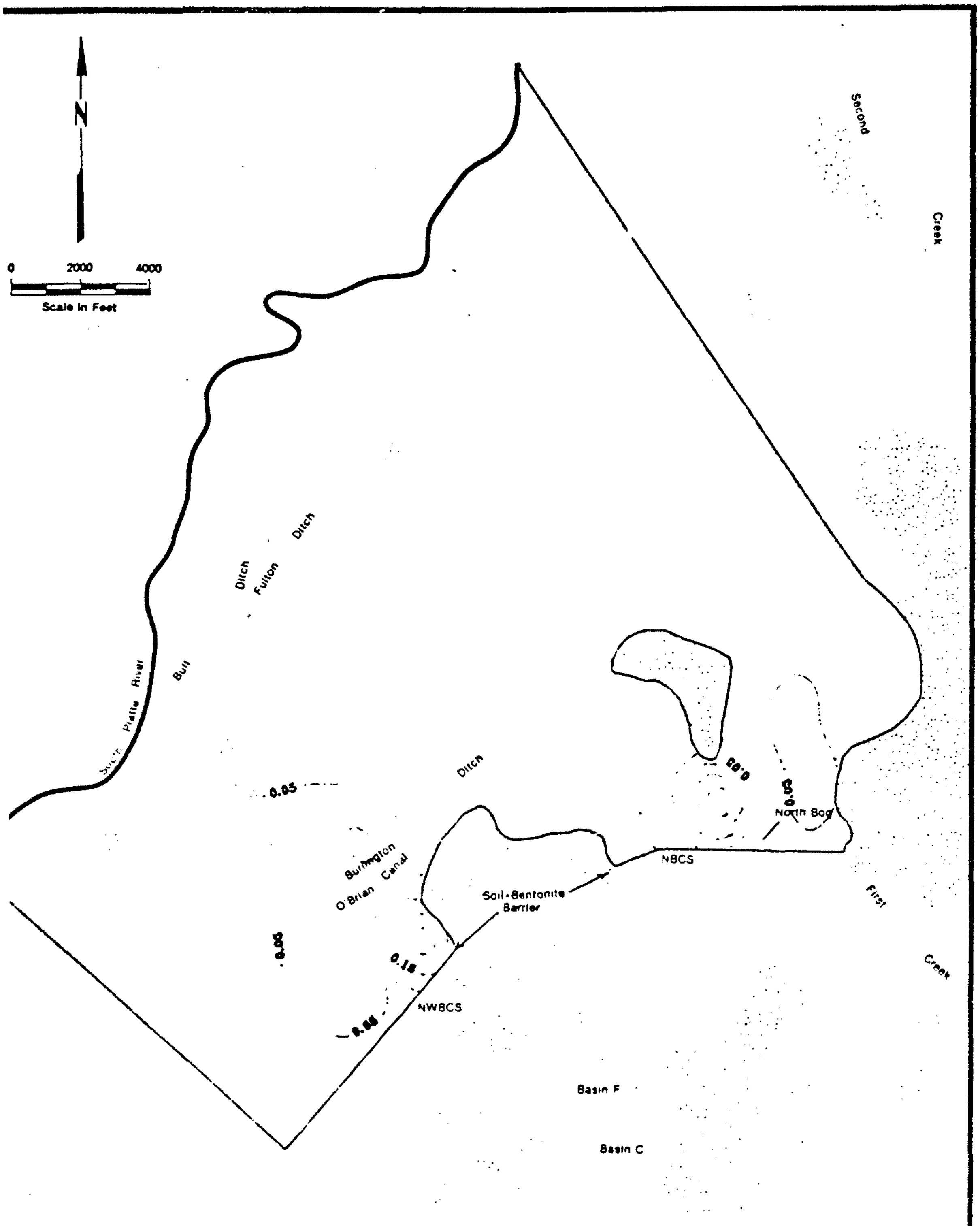
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



CE: WARNER, 1988

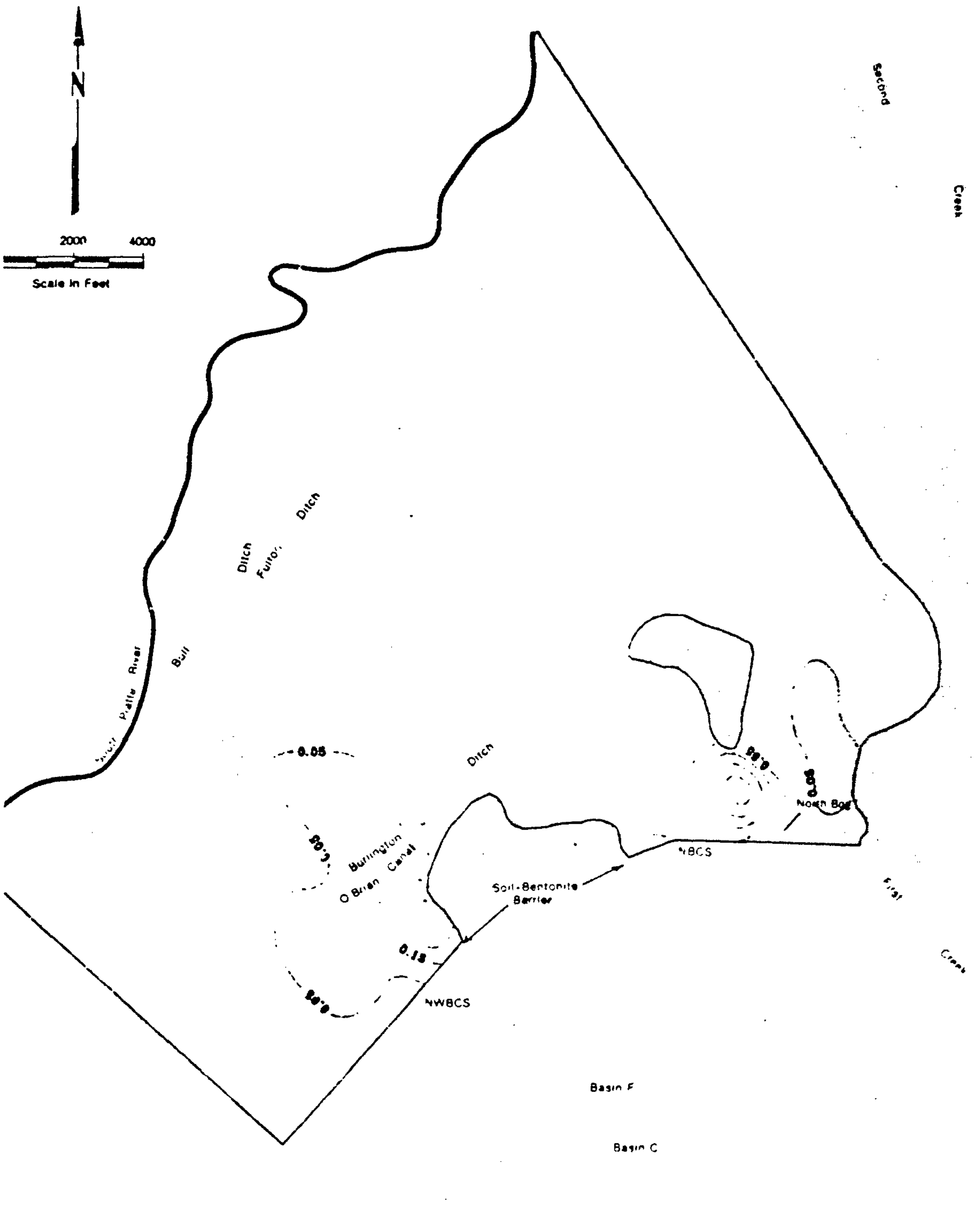
ıre G-37
-DRIN CONCENTRATION DISTRIBUTION
) IN 2017 (30 YEARS) WITH EXISTING
V SOUTH ADAMS COUNTY WELL FIELD,
UVIAL AQUIFER

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



E: WARNER, 1988

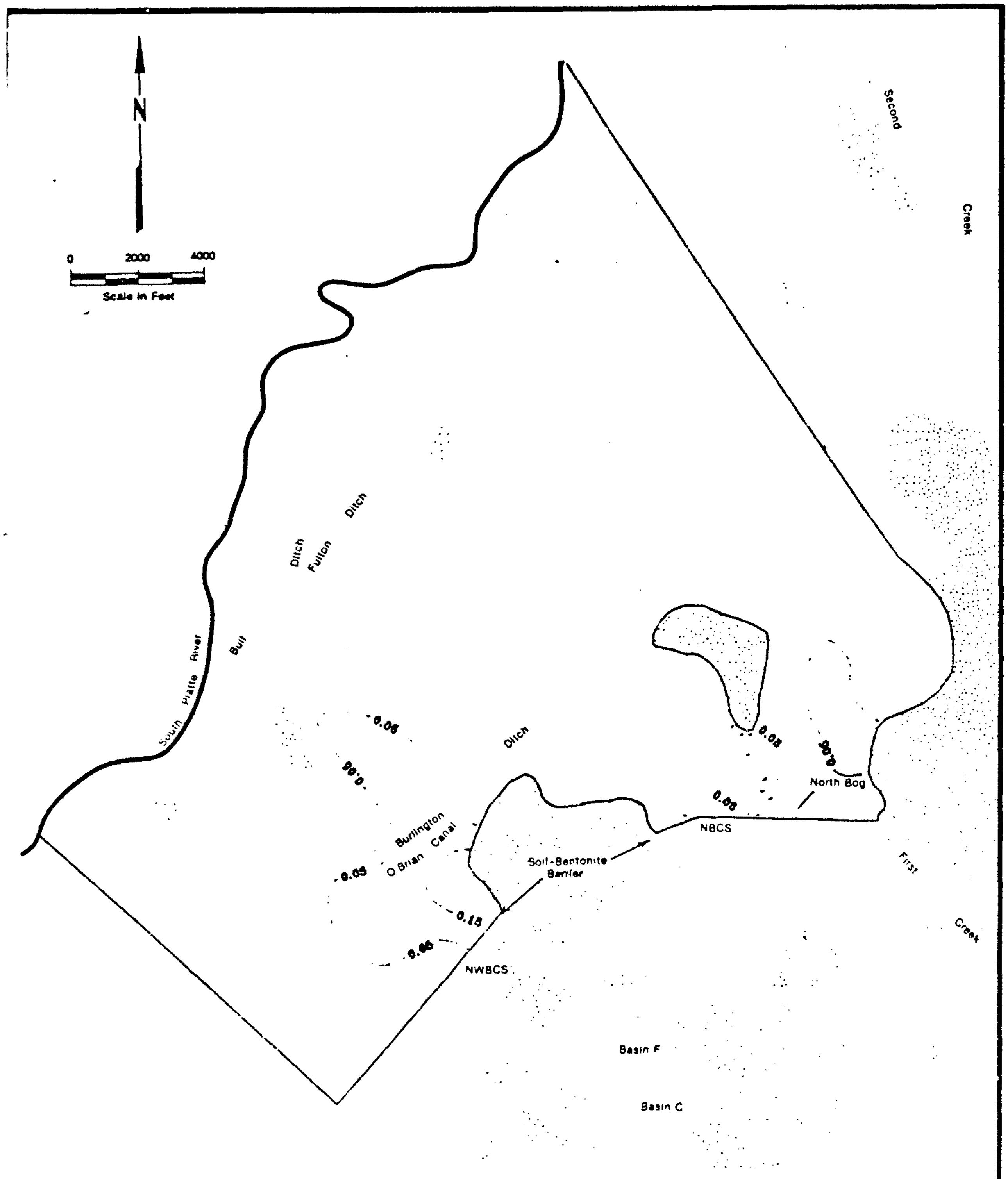
e G-38)RIN CONCENTRATION DISTRIBUTION IN 1992 (5 YEARS) FOR PROPOSED H ADAMS COUNTY WELL FIELD, VIAL AQUIFER	**Prepared for:** **U.S. Army Program Manager's Office** **For Rocky Mountain Arsenal** **Aberdeen Proving Ground, Maryland**



: WARNER, 1988

ɘ G-39
)RIN CONCENTRATION DISTRIBUTION
IN 1997 (10 YEARS) FOR PROPOSED
H ADAMS COUNTY WELL FIELD,
VIAL AQUIFER

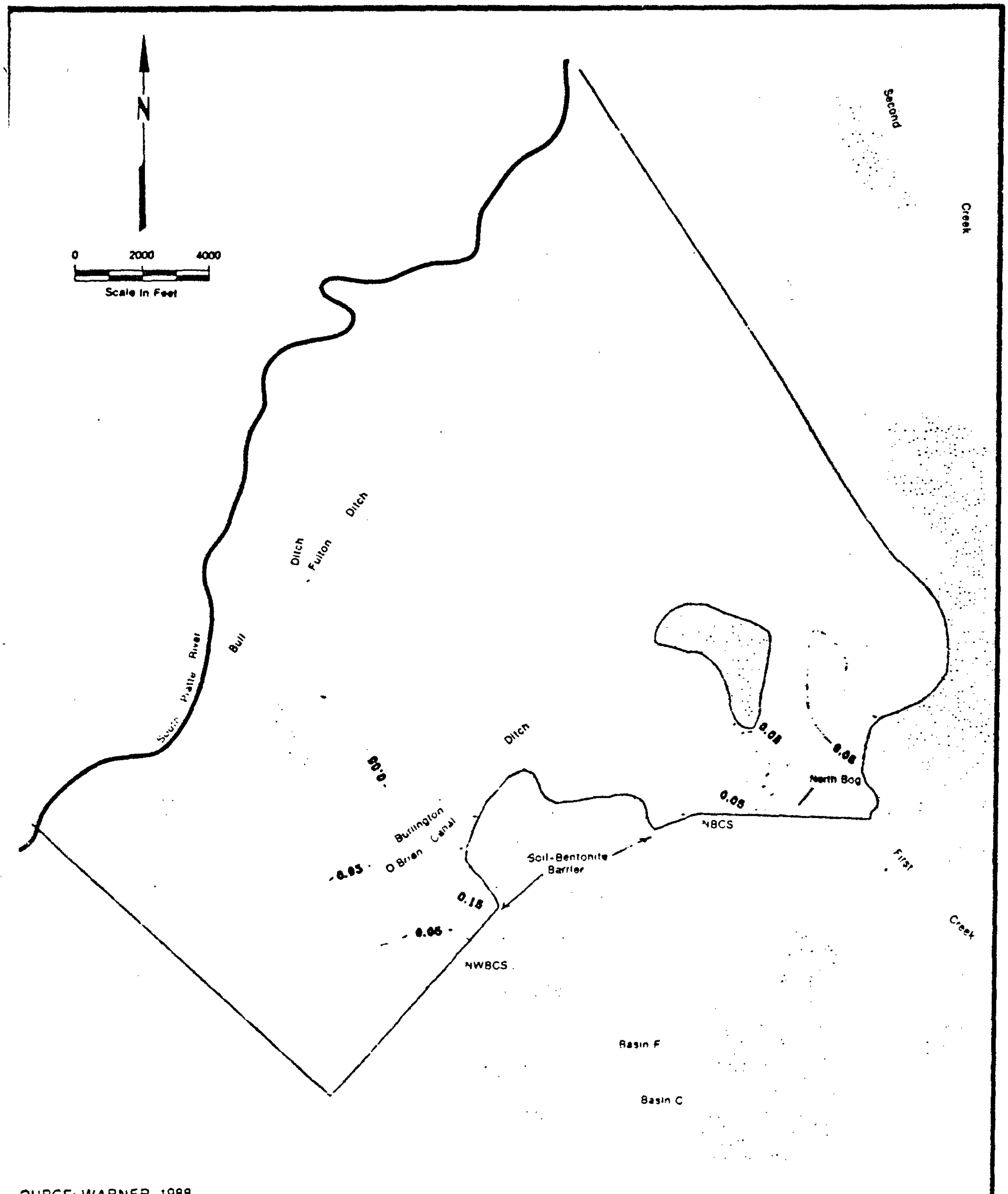
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



SOURCE: WARNER, 1988

Figure G-40
DIELDRIN CONCENTRATION DISTRIBUTION (ug/l) IN 2007 (20 YEARS) FOR PROPOSED SOUTH ADAMS COUNTY WELL FIELD, ALLUVIAL AQUIFER

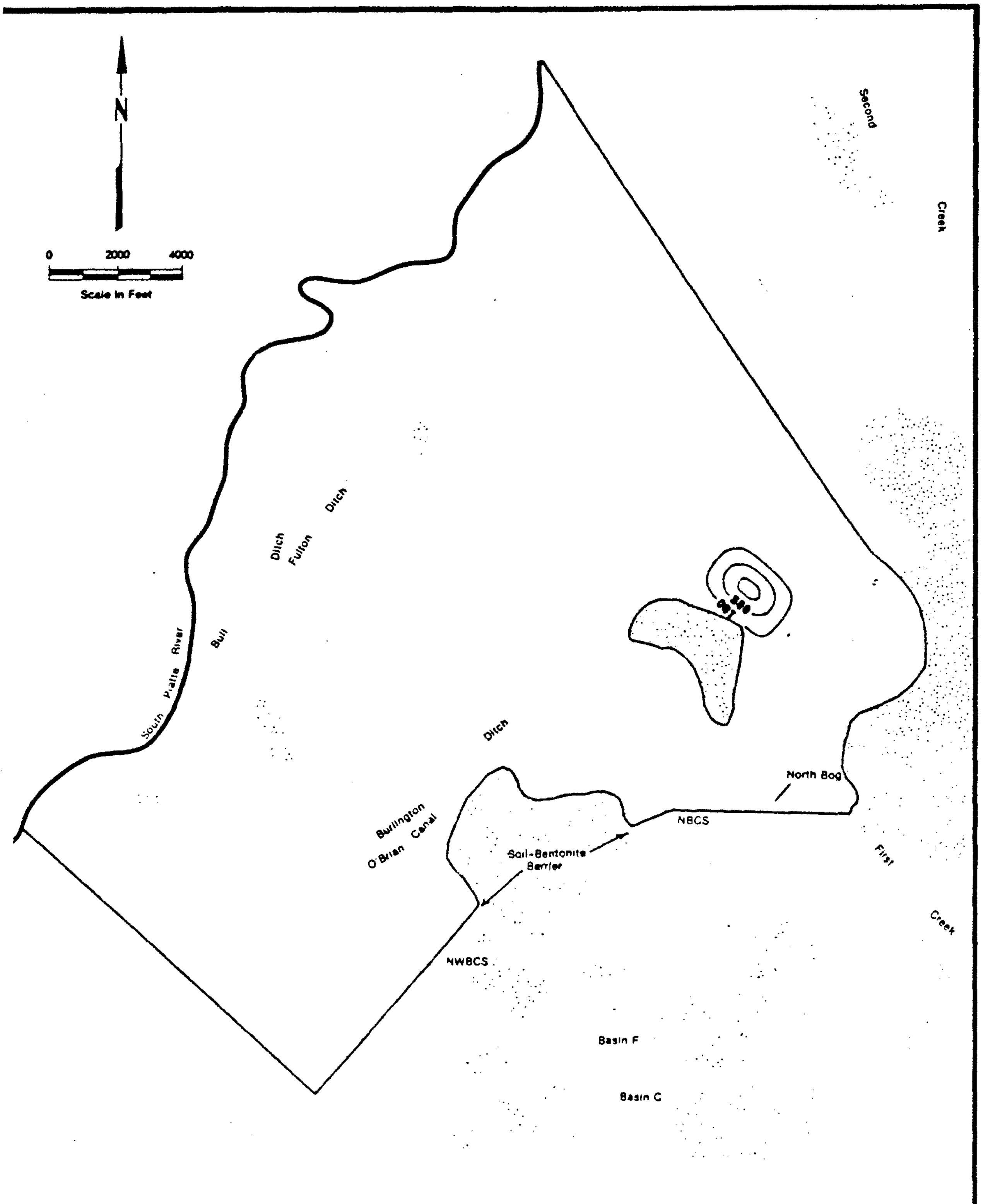
Prepared for:
U.S. Army Program Manager's Office For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



OURCE: WARNER, 1988

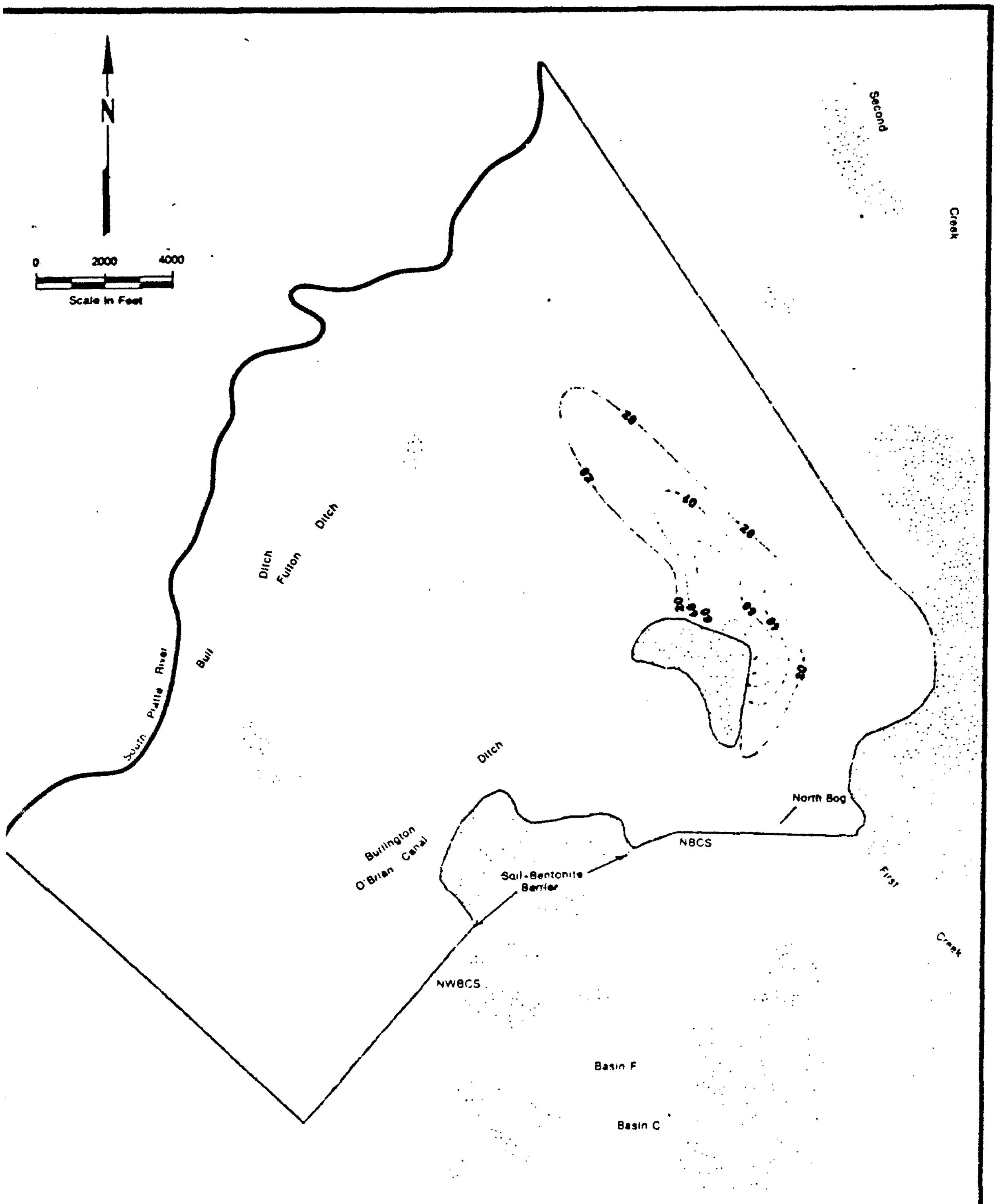
igure G-41
IELDRIN CONCENTRATION DISTRIBUTION
ıg/l) IN 2017 (30 YEARS) FOR PROPOSED
OUTH ADAMS COUNTY WELL FIELD,
LLUVIAL AQUIFER

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



gure G-42
HLOROFORM CONCENTRATION DISTRIBU-
ON (ug/l) 1987 ALLUVIAL AQUIFER
URCE: WARNER, 1988

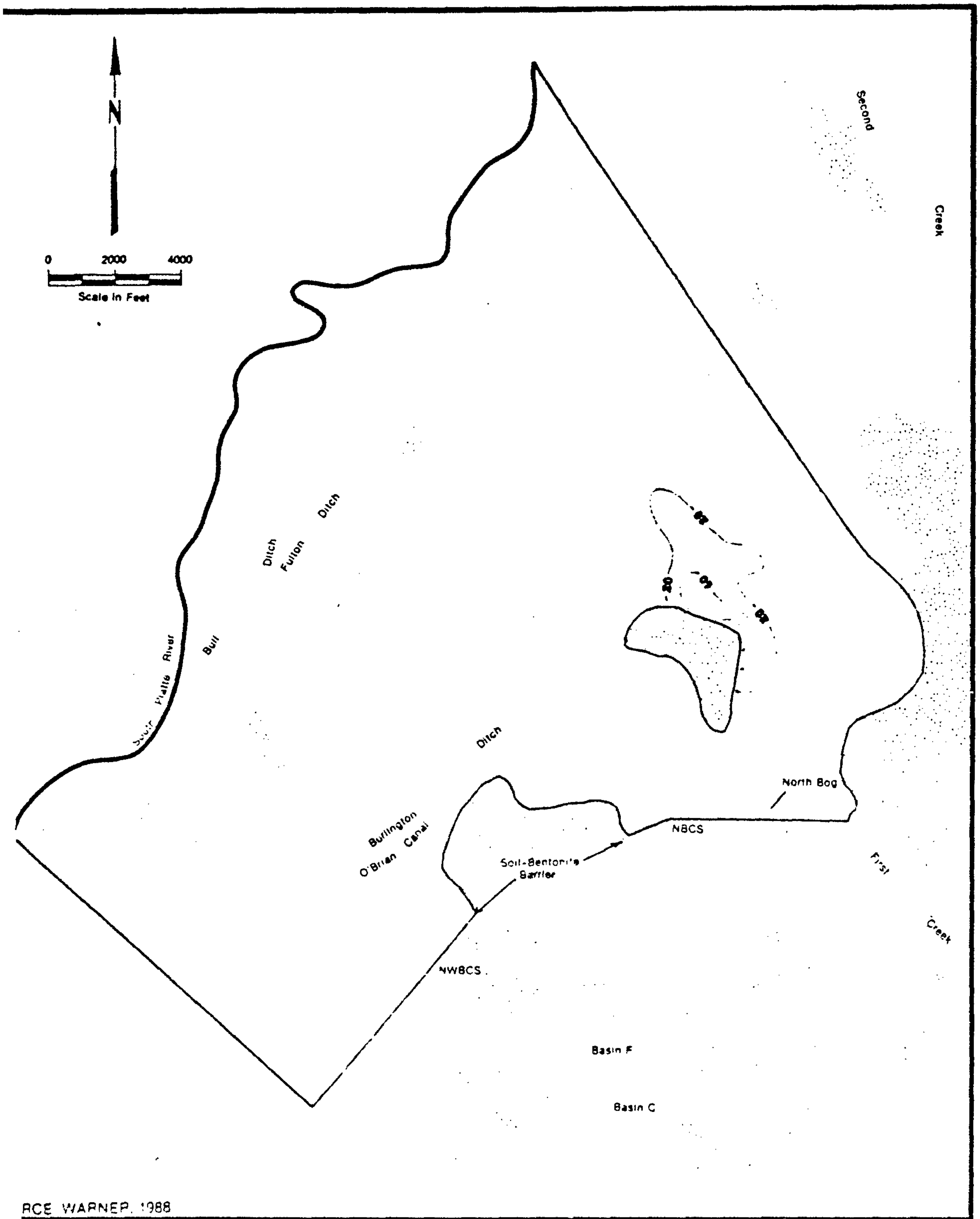
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



RCE: WARNER, 1988

jure G-43
LOROFORM CONCENTRATION DISTRIBU-
)N (ug/l) IN 1992 (5 YEARS) WITH EXISTING
W SOUTH ADAMS COUNTY WELL FIELD,
LUVIAL AQUIFER

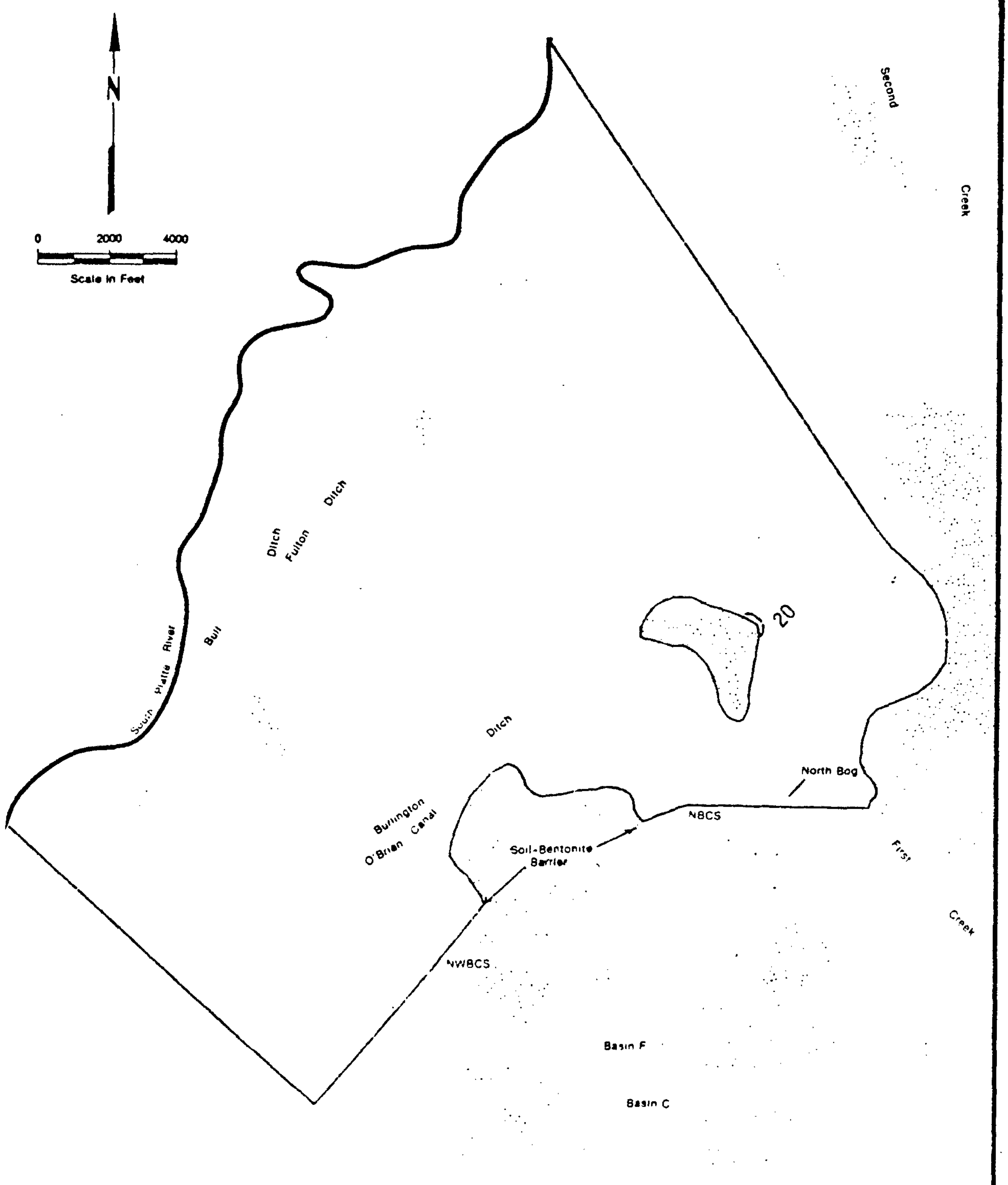
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



RCE WARNER, 1988

ure G-44
OLORFORM CONCENTRATION DISTRIBU-
N (ug/l) IN 1997 (10 YEARS) WITH
STING NEW SOUTH ADAMS COUNTY
LL FIELD, ALLUVIAL AQUIFER

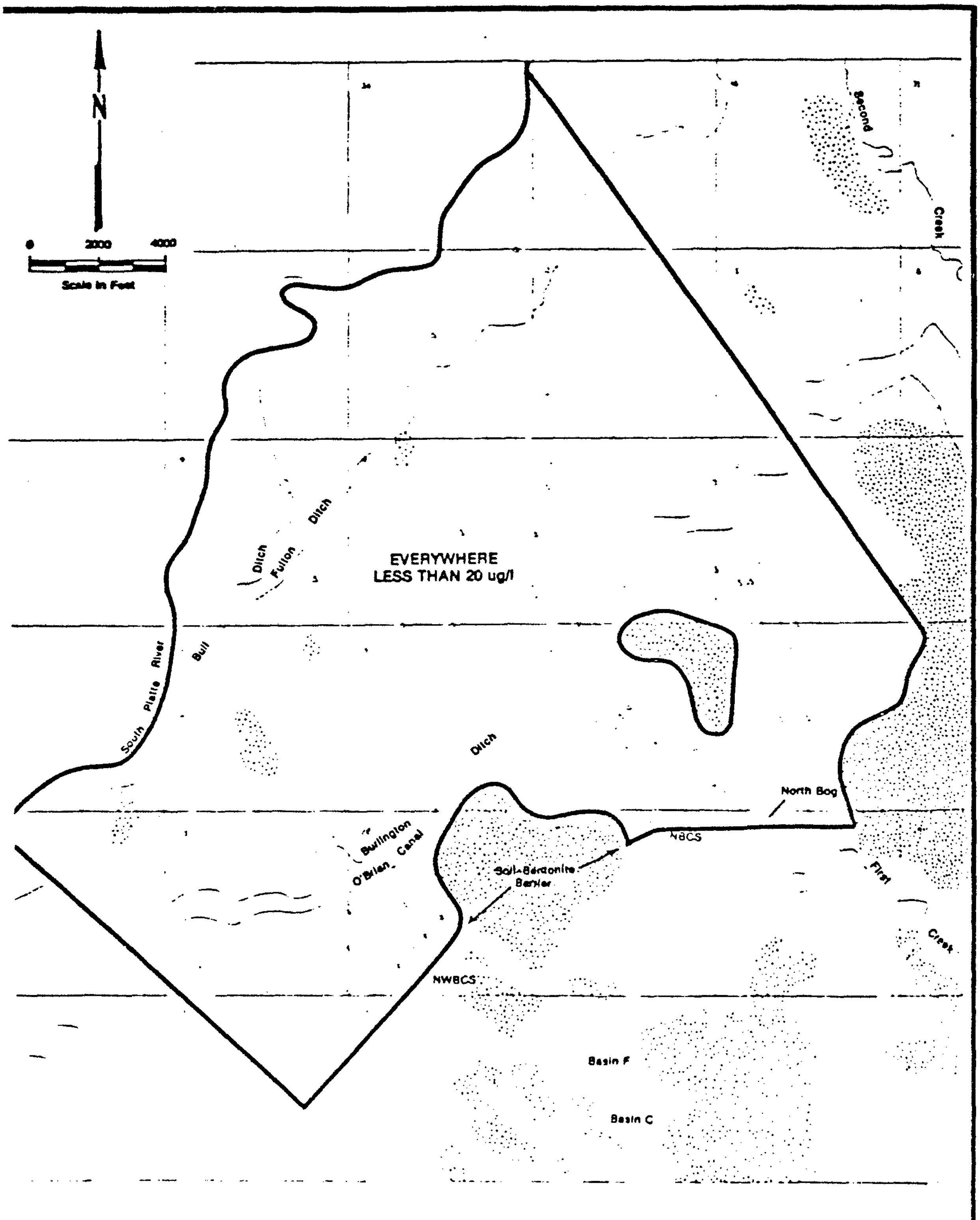
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



JRCE: WARNER, 1988

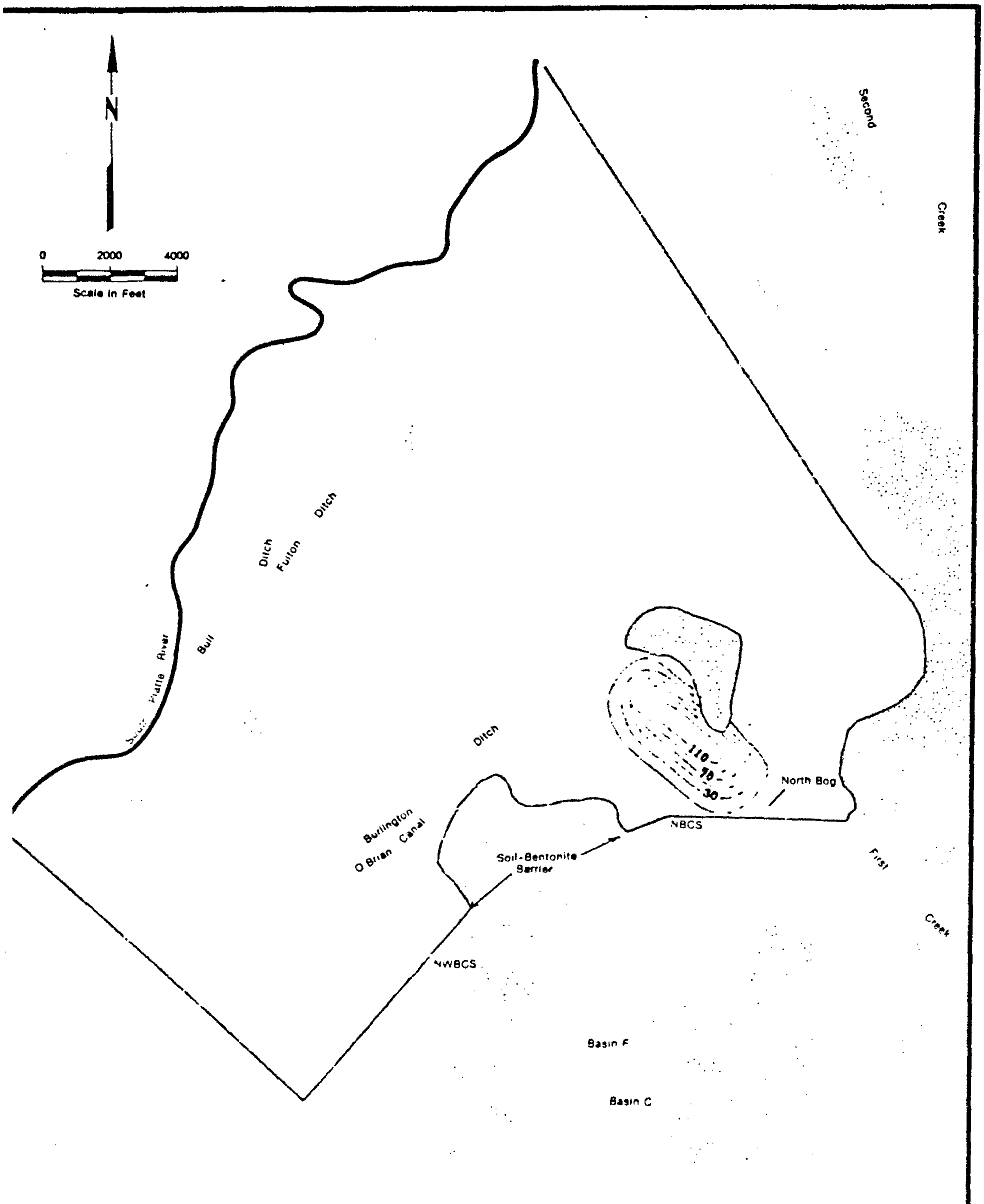
jure G-45
IOLROFORM CONCENTRATION DISTRIBU-
)N (ug/l) IN 2007 (20 YEARS) WITH
ISTING NEW SOUTH ADAMS COUNTY
:LL FIELD, ALLUVIAL AQUIFER

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



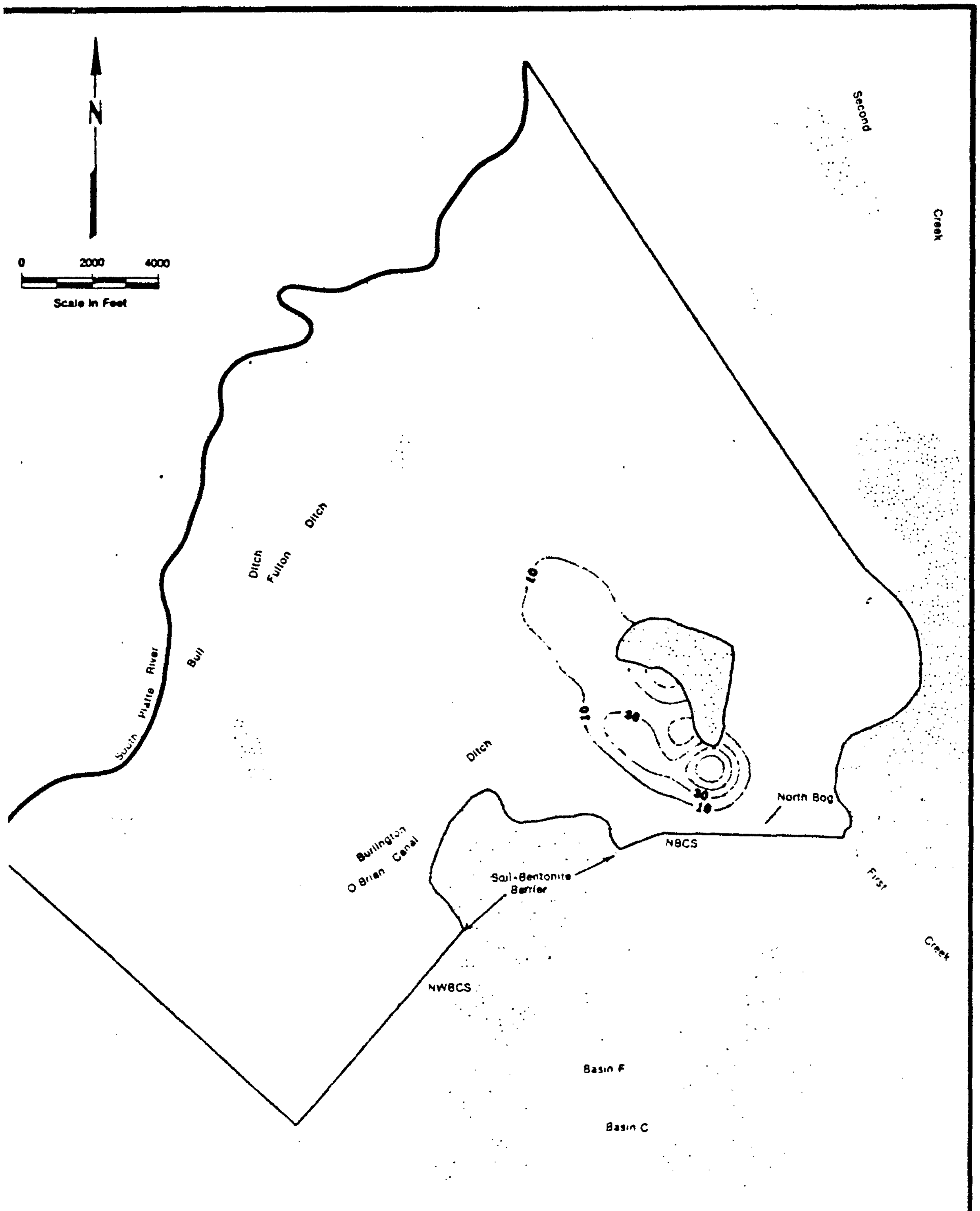
'e G-46
OROFORM CONCENTRATION DISTRIBUTION
IN 2017 (30 YEARS) WITH EXISTING NEW
TH ADAMS COUNTY WELL FIELD, ALLUVIAL
FER
E: WARNER, 1988

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



ıre G-47
ᴾD CONCENTRATION DISTRIBUTION (ug/l)
7, ALLUVIAL AQUIFER
CE: WARNER, 1988

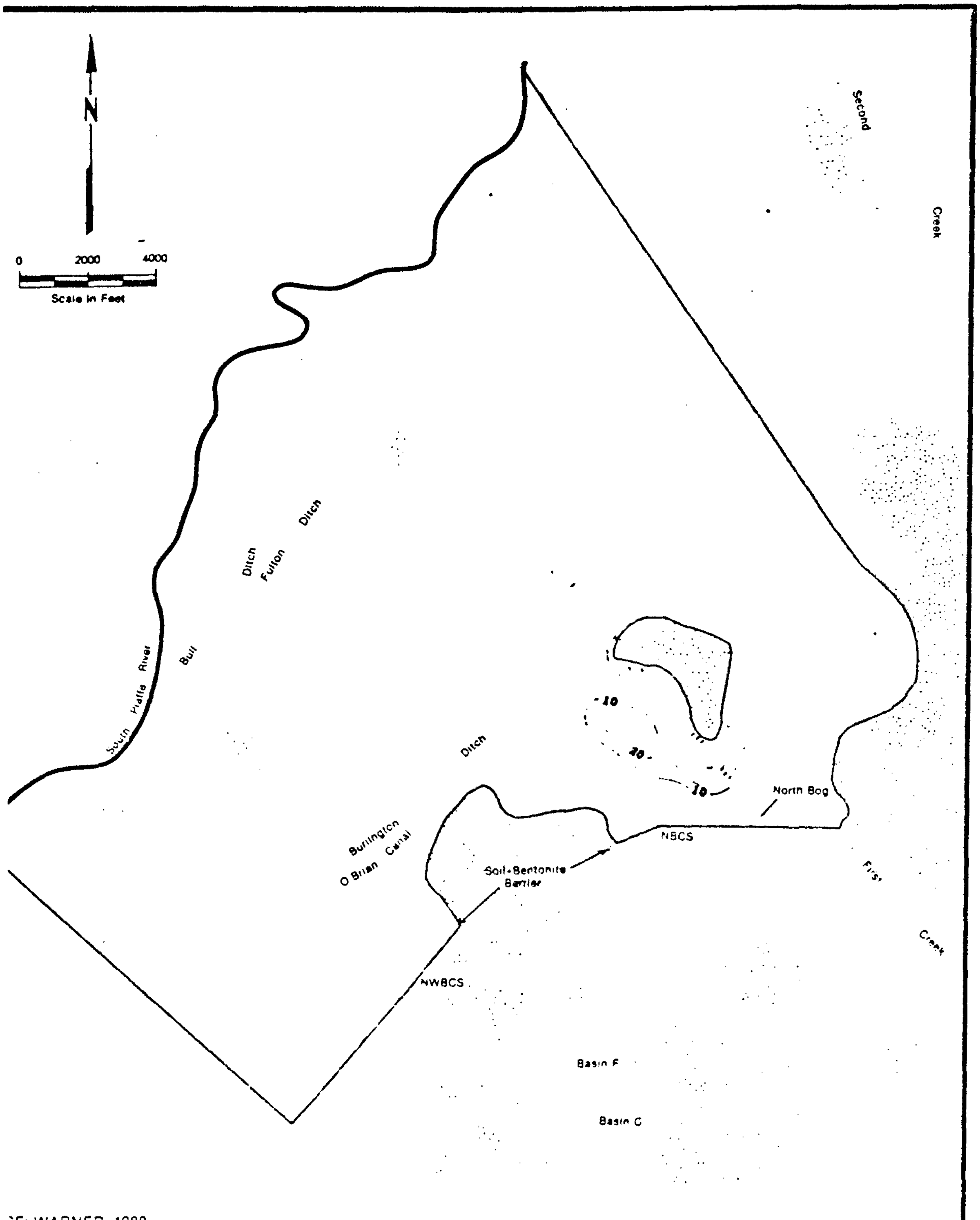
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



ICE: WARNER, 1988

ıre G-48
'D CONCENTRATION DISTRIBUTION (ug/l)
992 (5 YEARS) WITH EXISTING NEW
ITH ADAMS COUNTY WELL FIELD,
UVIAL AQUIFER

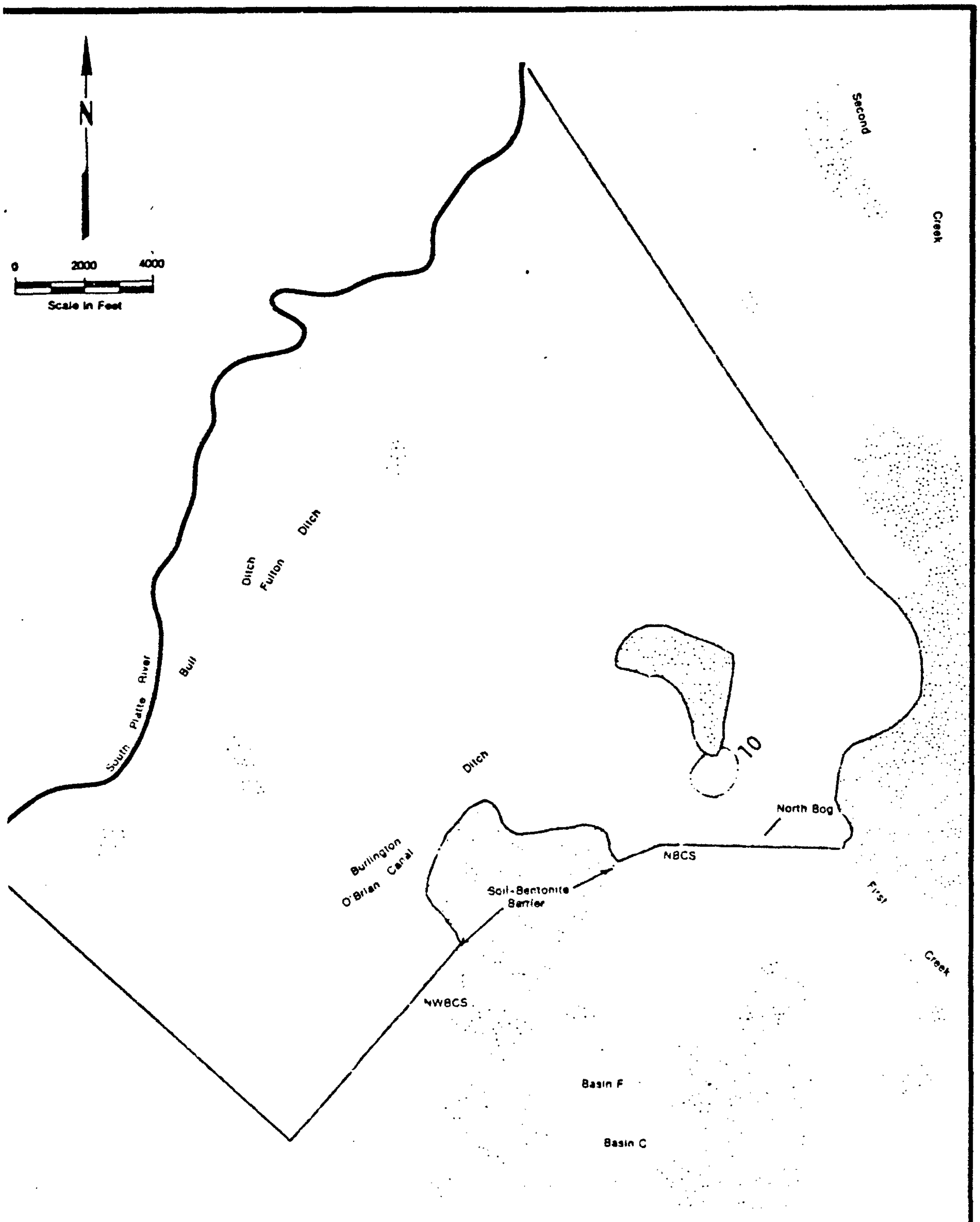
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:E: WARNER 1988

re G-49
D CONCENTRATION DISTRIBUTION (ug/l)
)97 (10 YEARS) WITH EXISTING NEW
TH ADAMS COUNTY WELL FIELD,
JVIAL AQUIFER

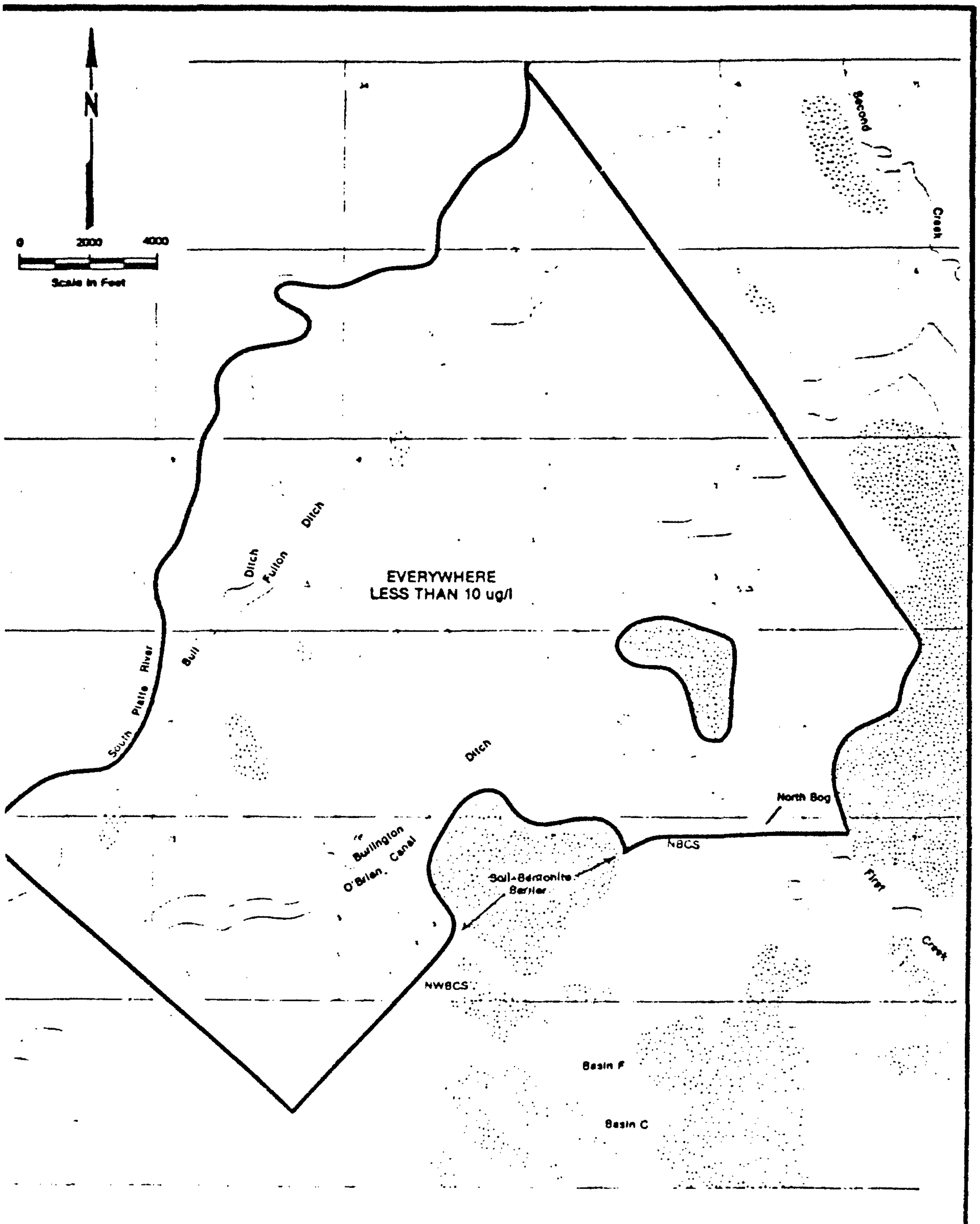
Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



:E: WARNER, 1988

'e G-50
D CONCENTRATION DISTRIBUTION (ug/l)
)17 (20 YEARS) WITH EXISTING NEW
TH ADAMS COUNTY WELL FIELD,
IVIAL AQUIFER

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland



'e G-51) CONCENTRATION DISTRIBUTION (ug/l) IN (30 YEARS) WITH EXISTING NEW SOUTH MS COUNTY WELL FIELD, ALLUVIAL FER E: WARNER 1988	Prepared for: U.S. Army Program Manager's Office For Rocky Mountain Arsenal Aberdeen Proving Ground, Maryland

TABLE OF CONTENTS FOR APPENDIX H

INTRODUCTION

A. Contents of Appendix

This Appendix sets forth the potential applicable or relevant and appropriate standards, requirements, criteria or limitations (ARARs) for air, ground water, soil, surface water or biota for use in the Endangerment Assessment for the Off-Post Operable Unit, as well as specifies whether: (i) the designated chemicals constitute CERCLA Hazardous Substances; (ii) are ranked as a potential human health risk on the priority-order list prepared by the U.S. Environmental Protection Agency (EPA) and the Agency for Toxic Substances and Disease Registry (ATSDR), 52 Fed. Reg. 12866 (1987); (iii) are air analytes; (iv) are ground water remedial investigation (RI) analytes; (v) are soil RI analytes; (vi) are soil EA analytes; (vii) are surface water RI analytes; or (viii) are biota RI analytes. (A separate but similar volume has been issued earlier to identify the potential chemical-specific ARARs for the On-Post Operable Unit.)

Where potential duly promulgated ARARs exist at this time for the designated chemicals, these are identified in this volume by citation to both the controlling regulatory provision and the relevant ARAR limit, standard or criterion derived from that regulation. For these purposes, all pertinent statutes and regulations of the EPA, U.S. Food and Drug Administration (FDA), and the State of Colorado (State) available through December 30, 1988, were reviewed to determine their suitability for inclusion in this document as potential ARARs.

B. PROCESS FOR SELECTING CHEMICAL-SPECIFIC ARARS

By issuing this list of potential ARARs, the Army does not purport to determine which of these regulations are applicable and which are relevant and appropriate, or even to represent that all of these regulations warrant selection as some form of ARARs for the Off-Post Operable Unit. Rather, this appendix of potential ARARs is prepared solely to ensure that decisionmaking with respect to the Off-Post Endangerment Assessment will be fully informed with respect to all existing regulations that merit consideration as ARARs.

It should be noted that the accompanying list of chemical-specific ARARs will be up-dated in the context of the Off-Post RMA Feasibility Study/Endangerment Assessment Report to reflect any Federal or pertinent State chemical-specific regulations promulgated prior to the issuance of the proposed final version of that report in the Spring of 1989.

The actual selection of ARARs for this portion of the RI/FS will occur in the context of the Off-Post RMA Feasibility Study/Endangerment Assessment Report in accordance with the terms of CERCLA Section 121(d)(2), 42 U.S.C. § 9621(d), the National Contingency Plan (NCP), EPA guidance that is not inconsistent with CERCLA and the NCP, and the proposed Consent Decree (including the RI/FS Process document).

The first step in this process will be to determine the chemicals for which an ARAR determination is warranted since 42 U.S.C. § 9621(d) provides that ARARs are to be selected only for hazardous substances, pollutants, or contaminants. Second, it will be necessary for the Army to determine whether ARARs exist for the designated

hazardous substances, pollutants or contaminants. Third, the Army will determine the ARARs to be attained for purposes of remedial action on the Off-Post Operable Unit and whether any ARARs should be waived in accordance with CERCLA's provisions. (Where either there is no existing ARAR or no ARAR is selected for a particular chemical compound, the Endangerment Assessment will set levels or standards of control through the risk assessment process that are to be protective of human health and the environment.) The Off-Post chemical-specific ARARs selected by the Army will be set forth in the Endangerment Assessment Report.

C. Potential Air ARARs

For the potential air ARARs for RMA contaminants in the Off-Post Operable Unit, all generally pertinent National Ambient Air Quality Standards (NAAQS) and Natural Emission Standards for Hazardous Air Pollutants (NESHAP) are identified.

No air ARARs have been expressly designated for the Off-Post Operable Unit for particulate matter because such particulate standards are not chemical-specific. Nevertheless, for purposes of clean-up of the RMA Off-Post Operable Unit, it should be noted that the provisions of 40 C.F.R. § 50.6 will be a potential ARAR: There will be no particulate matter (of whatever chemical) transported from RMA by air that is in excess of 75 micrograms per cubic meter--annual geometric mean and that 260 micrograms per cubic meter--maximum 24-hour concentration will not be exceeded more than once a year.

D. Potential Ground Water ARARs

Potential ground water ARARs for RMA contaminants in the Off-Post Operable Unit include Maximum Contaminant Levels (MCL) and non-zero Maximum Contaminant Level Goals (MCLG) from the National Primary Drinking Water Regulations (NPDW), 40 C.F.R. Part 141, the Clean Water Act's Toxic Pollutant Effluent Standards (TPES), 40 C.F.R. Part 129, the ground water protection standards of the Resource Conservation and Recovery Act, 40 C.F.R. Part 264 regulations (RCRA), non-zero human health protection provisions of the Ambient Water Quality Criteria (AWQC), 45 Fed. Reg. 79318 (1980)[1], and FDA's Tolerances for Pesticides in Food Administered by EPA (TPF).

E. Potential Soil ARARs

No potential chemical-specific ARARs were identified that might pertain to the RMA chemicals in the soils in the Army's Off-Post Operable Unit.

F. Potential Surface Water ARARs

Potential surface water ARARs for RMA contaminants in the lakes and streams of the Off-Post Operable Unit are similar to those for potential ground water (including

[1]It should be noted that whether the AWQC values designated herein as potential ground water ARARs are appropriate for utilization as ARARs is a matter that warrants serious consideration during the course of Endangerment Assessment decisionmaking. Since the indicated AWQC values are predicated on human consumption both of water and aquatic organisms in that water, and ground water does not contain aquatic life, use of alternative values (such as the adjusted AWQC found in the 1986 Superfund Public Health Evaluation Manual) may well be more appropriate in connection with ground water.

the NPDW, the TPES, RCRA, the non-zero human protection provisions of the AWQC and the TPFA), as well as the non-zero fresh water aquatic life protection provisions of AWQC.

G. Potential Biota ARARs

While there are no chemical-specific ARARs for RMA contaminants that pertain to the wild flora and fauna found in the Army's Off-Post Operable Unit (except for the aquatic life AWQC set for surface water), the levels that EPA and FDA have set for domesticated crops and animals with respect to pesticides found on or in such raw farm commodities will be a useful aid to ARAR-decisionmaking for such domestic acriculture in the Endangerment Assessment (and may also have utility with respect to wild flora and fauna on a case-by-case basis). Accordingly, EPA's Tolerances for Pesticide Chemicals On or In Raw Agricultural Commodities (TPCRAC), 40 C.F.R. Part 180, and the FDA's TPFA have been identified. It should be noted that the designated pesticide tolerances are not the same as action levels. As EPA has previously explained, "[t]here are major differences between tolerances and action levels. A tolerance is set before the fact to cover residues which will result from legal and purposeful use of the pesticide. An action level is a more appropriate mechanism for situations involving residues which persist in the environment after the once-legal use of that pesticide has been halted." 51 Fed. Reg. 46666 (1986). Thus, while EPA's pesticide tolerance level information is provided here (along with FDA action levels) to aid ARAR

decisionmaking, it is only during the course of ARAR selection that the relevance, if any, of these tolerance levels to the RMA cleanup will be determined.[2]

H. Potential State ARARs

In accordance with CERCLA Section 121, State statutes and regulations warrant consideration as potential ARARs only where they meet the three-part test of being: (i) promulgated; (ii) more stringent than any Federal ARAR; and (iii) could not effectively result in the statewide prohibition of land disposal (where the State standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations). To date the State has not identified any chemical-specific ARARs pertinent to the Off-Post Operable Unit that satisfy the three elements of this test, and the Army has been unable to identify any existing State regulations that satisfy this CERCLA criteria. Thus, no State chemical-specific ARARs are cited in the current edition of this appendix as potential ARARs.

I. Exclusion of Worker Protection Regulations from Appendix

It should be noted that worker protection regulations are not treated as chemical-specific ARARs for purposes of this appendix. These will be separately addressed for

[2]With respect to certain of the chemicals that do not have designated tolerance levels, it should be noted that EPA has revoked the pesticide tolerances for which related registered uses have been cancelled, EPA has recommended action levels to FDA to replace the existing tolerances and EPA has made recommendations to the FDA and the U.S. Department of Agriculture regarding existing action levels for commodities bearing residues for which tolerances have not been established. Among the pesticides for which EPA has revoked tolerances are: (i) DDT (51 Fed. Reg. 46658 (1986)); (ii) TDE (id.); (iii) DDE (id.); (iv) Aldrin (51 Fed. Reg. 46662 (1986); (v) Dieldrin (id.); and (vi) Chlordane (51 Fed. Reg. 46665 (1986).)

purposes of the final response action for the RMA Off-Post Operable Unit in accordance with the EPA regulations adopted pursuant to 42 U.S.C. § 9651(f) (which provides that the NCP is to be amended by December 11, 1988, to provide procedures for the protection of the health and safety of employees involved in response actions) and the provisions of the OSHA interim final rule at Fed. Reg. 45654 (1986) (as this may be subsequently finalized).

POTENTIAL CHEMICAL-SPECIFIC ARARs FOR THE ENDANGERMENT ASSESSMENT FOR THE OFF-POST OPERABLE UNIT, RMA

POTENTIAL
CHEMICAL-SPECIFIC ARARS FOR
THE ENDANGERMENT ASSESSMENT FOR THE
OFF-POST OPERABLE UNIT
ROCKY MOUNTAIN ARSENAL

1. PRIMARY NAME: Acetone (Dimethyl ketone)
   CERCLA Hazardous Substance: Yes
   Ranking on ATSDR Priority List: No
   Air Analyte: No
   Potential Air ARAR: No
   Ground Water RI Analyte: No
   Potential Ground Water ARAR: No
   Soil RI Analyte: No
   Soil EA Analyte: No
   Potential Soil ARAR: No
   Surface Water RI Analyte: No
   Potential Surface Water ARAR: No
   Biota RI Analyte: No
   Potential Biota ARAR: No

2. PRIMARY NAME: Aldrin
   CERCLA Hazardous Substance: Yes
   Ranking on ATSDR Priority List: Priority Group 1
   Air Analyte: Yes
   Potential Air ARAR: No
   Ground Water RI Analyte: Yes
   Potential Ground Water ARAR:
   (a) 40 C.F.R. § 129.100(a)(3) (TPES) -- 0.003 μg/l;
   (b) 45 Fed. Reg. 79325 (1980) (AWQC) -- 0.74 ng/l (10^{-5}), 0.074 ng/l (10^{-6}), 0.0074 ng/l (10^{-7}) (Human Health).
   Soil RI Analyte: Yes
   Soil EA Analyte: Yes
   Potential Soil ARAR: No
   Surface Water RI Analyte: Yes
   Potential Surface Water ARAR:
   (a) 40 C.F.R. § 129.100(a)(3) (TPES) -- 0.003 μg/l;
   (b) 45 Fed. Reg. 79325 (1980) (AWQC) -- 0.74 ng/l (10^{-5}), 0.074 ng/l (10^{-6}), 0.0074 ng/l (10^{-7}) (Human Health);
   (c) 45 Fed. Reg. 79325 (1980) (AWQC) -- 3 μg/l (Aquatic Life).
   Biota RI Analyte: Yes
   Potential Biota ARAR: No

3. PRIMARY NAME: Arsenic

CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: (a) 40 C.F.R. § 61.162(a)(1) (NESHAP) -- uncontrolled total arsenic emissions from existing glass melting furnaces shall be less than 2.5 Mg per year;
(b) 40 C.F.R. § 61.162(b)(1) (NESHAP) -- uncontrolled total arsenic emissions from new or modified glass melting furnaces shall be less than 0.4 Mg per year.

Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) 45 Fed. Reg. 79325-79326 (1980) (AWQC) -- 22 ng/l (10^{-5}), 2.2 ng/l (10^{-6}), 0.22 ng/l (10^{-7}) (Human Health).

Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) 45 Fed. Reg. 79325-79326 (1980) (AWQC) -- 22 ng/l (10^{-5}), 2.2 ng/l (10^{-6}), 0.22 ng/l (10^{-7}) (Human Health);
(d) 45 Fed. Reg. 79325 (1980) (AWQC) -- 440 μg/l (Aquatic Life).

Biota RI Analyte: Yes
Potential Biota ARAR: No

4. <u>PRIMARY NAME</u>: Arsenic chloride (AT)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes (Arsenic)
Potential Air ARAR: (a) 40 C.F.R. § 61.162(a)(1) (NESHAP) (Arsenic) -- uncontrolled total arsenic emissions from existing glass melting furnaces shall be less than 2.5 Mg per year;
(b) 40 C.F.R. § 61.162(b)(1) (NESHAP) (Arsenic) -- uncontrolled total arsenic emissions from new or modified glass melting furnaces shall be less than 0.4 Mg per year.

Ground Water RI Analyte: Yes (Arsenic)
Potential Ground Water ARAR: (a) (Arsenic) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) (Arsenic) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) (Arsenic) 45 Fed. Reg. 79325-79326 (1980) (AWQC) -- 22 ng/l (10^{-5}), 2.2 ng/l (10^{-6}), 0.22 ng/l (10^{-7}) (Human Health).
Soil RI Analyte: Yes (Arsenic)
Soil EA Analyte: Yes (Arsenic)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Arsenic)
Potential Surface Water ARAR: (a) (Arsenic) 40 C.F.R. § 141.11(b) (NPDW --MCL) -- 50 μg/l;
(b) (Arsenic) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) (Arsenic) 45 Fed. Reg. 79325-79326 (1980) (AWQC) -- 22 ng/l (10^{-5}), 2.2 ng/l (10^{-6}), 0.22 ng/l (10^{-7}) (Human Health);
(d) (Arsenic) 45 Fed. Reg. 79325 (1980) (AWQC) -- 440 μg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

5. PRIMARY NAME: Arsenic trioxide (ATO)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes (Arsenic)
Potential Air ARAR: (a) (Arsenic) 40 C.F.R. § 61.162(a)(1) (NESHAP) -- uncontrolled total arsenic emissions from existing glass melting furnaces shall be less than 2.5 Mg per year;
(b) (Arsenic) 40 C.F.R. § 61.162(b)(1) (NESHAP) -- uncontrolled total arsenic emissions from new or modified glass melting furnaces shall be less than 0.4 Mg per year.

Ground Water RI Analyte: Yes (Arsenic)
Potential Ground Water ARAR: (a) (Arsenic) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) (Arsenic) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) (Arsenic) 45 Fed. Reg. 79325-79326 (1980) (AWQC) -- 22 ng/l (10^{-5}), 2.2 ng/l (10^{-6}), 0.22 ng/l (10^{-7}) (Human Health);
Soil RI Analyte: Yes (Arsenic)
Soil EA Analyte: Yes (Arsenic)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Arsenic)
Potential Surface Water ARAR: (a) (Arsenic) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) (Arsenic) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) (Arsenic) 45 Fed. Reg. 79325-79326 (1980) (AWQC) -- 22 ng/l (10^{-5}), 2.2 ng/l (10^{-6}), 0.22 ng/l (10^{-7}) (Human Health);
(d) (Arsenic) 45 Fed. Reg. 79325 (1980) (AWQC) -- 440 μg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

PRIMARY NAME: Benzene
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: No
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.61(a), 52 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 5 μg/l;
(b) 45 Fed. Reg. 79326 (1980) (AWQC) -- 6.6 μg/l (10^{-5}), 0.66 (10^{-6}), 0.066 (10^{-7}) (Human Health).

Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. §141.61(a); 52 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 5 μg/l;
(b) 45 Fed. Reg. 79326 (1980) (AWQC) -- 6.6 μg/l (10^{-5}), 0.66 (10^{-6}), 0.066 (10^{-7}) (Human Health);
(c) 45 Fed. Reg. 79326 (1980) -- 5,300 μg/l (Aquatic Life).

Biota RI Analyte: No
Potential Biota ARAR: No

7. PRIMARY NAME: Cadmium
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR:
(a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 10 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 10 μg/l;
(c) 45 Fed. Reg. 79327 (1980) (AWQC) -- 10 μg/l (Human Health).
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR:
(a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 10 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 10 μg/l;
(c) 45 Fed. Reg. 79327 (1980) (AWQC) -- 10 μg/l (Human Health);
(d) 45 Fed. Reg. 79326-79327 (1980) (AWQC) -- 24 hour average to be determined by e (1.05 [In(hardness)]-8.73), but not to exceed value of e (1.05 [In(hardness)]-3.73) at any one time (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

. PRIMARY NAME: Calcium
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

9. PRIMARY NAME: Calcium bromate (Bromic acid, calcium salt)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Calcium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Calcium)
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

10. PRIMARY NAME: Calcium carbide
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Calcium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Calcium)
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

11 PRIMARY NAME: Calcium chloride
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Calcium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Calcium)
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

12. <u>PRIMARY NAME</u>: Carbon tetrachloride (Perchloromethane, Tetrachloromethane)

CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 2
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.61(a), 42 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 5 $\mu g/l$;
(b) 45 Fed. Reg. 79327 (1980) (AWQC) -- 4.0 $\mu g/l$ (10^{-5}), 0.40 $\mu g/l$ (10^{-6}), 0.04 $\mu g/l$ (10^{-7}) (Human Health).
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. § 141.61(a), 42 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 5 $\mu g/l$;
(b) 45 Fed. Reg. 79327 (1980) (AWQC) -- 4.0 $\mu g/l$ (10^{-5}), 0.40 $\mu g/l$ (10^{-6}), 0.04 (10^{-7}) (Human Health);
(c) 45 Fed. Reg. 79327 (1980) (AWQC) -- 35,200 $\mu g/l$ (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

13. <u>PRIMARY NAME</u>: Chloride

CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

14. PRIMARY NAME: Chlorinated phenol

CERCLA Hazardous Substance: Yes

Ranking on ATSDR Priority List: Priority Group 4 (2,4,6-Trichlorophenol and 2,4-Dichlorophenol)

Air Analyte: No

Potential Air ARAR: No

Ground Water RI Analyte: No

Potential Ground Water ARAR:

(a) 2,4,5-trichlorophenol -- 45 Fed. Reg. 79329 (1980) (AWQC) -- 2600 µg/l (Human Health);

(b) 2,4,6-trichlorophenol -- 45 Fed. Reg. 79329 (1980) (AWQC) -- 12 µg/l (10^{-5}), 1.2 µg/l (10^{-6}), 0.12 µg/l (10^{-7}) (Human Health);

(c) Sufficient data was not available to derive AWQC toxicity levels for other compounds that would be protective of human health, 45 Fed. Reg. 79329 (1980).

Soil RI Analyte: No

Soil EA Analyte: No

Potential Soil ARAR: No

Surface Water RI Analyte: No

Potential Surface Water ARAR:

(a) 2,4,5-trichlorophenol -- 45 Fed. Reg. 79329 (1980) (AWQC) -- 2600 µg/l (Human Health);

(b) 2,4,6-trichlorophenol -- 45 Fed. Reg. 79329 (1980) (AWQC) -- 12 µg/l (10^{-5}), 1.2 µg/l (10^{-6}), 0.12 µg/l (10^{-7}) (Human Health);

(c) Sufficient data was not available to derive AWQC toxicity levels for other compounds that would be protective of human health, 45 Fed. Reg. 79329 (1980);

(d) 4-chloro-3-methyphenol, 45 Fed. Reg. 79329 (1980) (AWQC) -- 30 µg/l (Aquatic Life);

(e) 2,4,6-trichlorophenol, 45 Fed. Reg. 79329 (1980) (AWQC) -- 970 µg/l (Aquatic Life);

(f) Other chlorinated phenols, 45 Fed. Reg. 79329 (1980) (AWQC) -- 500,000 µg/l (Aquatic Life).

Biota RI Analyte: No

Potential Biota ARAR: No

15. <u>PRIMARY NAME</u>: Chlorobenzene (Monochlorobenzene)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 3
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 45 Fed. Reg. 79327-79328 (1980) (AWQC-Monochlorobenzene) -- 488 $\mu g/l$ (Human Health)
Soil RI Analyte: Yes (Benzene)
Soil EA Analyte: Yes (Benzene)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Benzene)
Potential Surface Water ARAR: (a) 45 Fed. Reg. 79327-79328 (1980) (AWQC-Monochlorobenzene) -- 488 $\mu g/l$ (Human Health);
(b) 45 Fed. Reg. 79327 (1980) (AWQC) -- 50 $\mu g/l$ (7.5 days exposure) (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

16. PRIMARY NAME: Chloroform (Trichloromethane)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.12 (NPDW -- MCL) -- 100 $\mu g/l$ (Note this is the total combined limit for this and all other trihalomethanes);
(b) 45 Fed. Reg. 79330 (1980) (AWQC) -- 1.9 $\mu g/l$ (10^{-5}), 0.19 $\mu g/l$ (10^{-6}), 0.019 $\mu g/l$ (10^{-7}) (Human Health).
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. § 141.12 (NPDW -- MCL) -- 100 $\mu g/l$ (Note this is the total combined limit for this and all other trihalomethanes);
(b) 45 Fed. Reg. 79330 (1980) (AWQC) -- 1.9 $\mu g/l$ (10^{-5}), 0.19 $\mu g/l$ (10^{-6}), 0.019 $\mu g/l$ (10^{-7}) (Human Health);
(c) 45 Fed. Reg. 79330 (1980) (AWQC) -- 1240 $\mu g/l$ (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

17. <u>PRIMARY NAME</u>: p-Chlorophenyl methyl sulfide (CPMS, PCPMS)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (2-Chlorophenol) 45 Fed. Reg. 79330 (1980) (AWQC) -- 4380 µg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

18. <u>PRIMARY NAME</u>: p-Chlorophenyl methyl sulfone ($CPMSO_2$, $PCPMSO_2$)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (2-Chlorophenol) 45 Fed. Reg. 79330 (1980) (AWQC) -- 4380 µg/l (Aquatic Life).

Biota RI Analyte: No
Potential Biota ARAR: No

19. PRIMARY NAME: p-Chlorophenyl methyl sulfoxide (CPMSO, PCPMSO)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (2-Chlorophenol) 45 Fed. Reg. 79330 (1980) (AWQC) -- 4380 μg/l (Aquatic Life).

Biota RI Analyte: No
Potential Biota ARAR: No

20. PRIMARY NAME: Chromium
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l.
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l.
Biota RI Analyte: No
Potential Biota ARAR: No

21. <u>PRIMARY NAME</u>: Chromium III
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes (Chromium)
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Chromium)
Potential Ground Water ARAR: 45 Fed. Reg. 79331 (1980) (AWQC) -- 0.170 μg/l (Human Health)
Soil RI Analyte: Yes (Chromium)
Soil EA Analyte: Yes (Chromium)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Chromium)
Potential Surface Water ARAR: (a) 45 Fed. Reg. 79331 (1980) (AWQC) -- 0.170 μg/l (Human Health);
(b) 45 Fed. Reg. 79331 (1980) (AWQC) -- to be determined by e (1.08 [In(hardness)] + 3.48) (Aquatic Life.
Biota RI Analyte: No
Potential Biota ARAR: No

22. <u>PRIMARY NAME</u>: Chromium VI
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes (Chromium)
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Chromium)
Potential Ground Water ARAR: 45 Fed. Reg. 79331 (1980) (AWQC) -- 50 μg/l (Human Health)
Soil RI Analyte: Yes (Chromium)
Soil EA Analyte: Yes (Chromium)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Chromium)
Potential Surface Water ARAR: (a) 45 Fed. Reg. 79331 (1980) (AWQC) -- 50 μg/l (Human Health);
(b) 45 Fed. Reg. 79331 (1980) (AWQC) -- 24 hour average to be determined by e (1.08 [In(hardness)] + 3.48) (Aquatic Life.
Biota RI Analyte: No
Potential Biota ARAR: No

23. PRIMARY NAME: Copper

CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 3
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 21 C.F.R. § 193.90 (TPFA) -- tolerance of 1 part per million for potable water for residues of copper resulting from the use as algicides or herbicides of basic copper carbonate (molachite), copper sulfate (see below), copper monoethandime, and copper to control aquatic plants in reservoirs, lakes, ponds, irrigation ditches and other potential sources of potable water.
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 21 C.F.R. § 193.90 (TPFA) -- tolerance of 1 part per million for potable water for residues of copper resulting from the use as algicides or herbicides of basic copper sulfate (and the other copper compounds cited in "Potential Ground Water ARAR" above) to control aquatic plants in reservoirs, lakes, ponds, irrigation ditches and other potential sources of potable water;
(b) 45 Fed. Reg. 79331 (1980) (AWQC) -- 24 hour average is 5.6 $\mu g/l$ and concentration at any one time should not exceed e (0.94 [In(hardness)]-1.23) (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

24. <u>PRIMARY NAME</u>: Copper sulfate
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes (Copper)
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Copper)
Potential Ground Water ARAR: 21 C.F.R. § 193.90 (TPFA) -- tolerance of 1 part per million for potable water for residues of copper resulting from the use as algicides or herbicides of basic copper carbonate (molachite), copper sulfate (<u>see</u> below), copper monoethandime, and copper to control aquatic plants in reservoirs, lakes, ponds, irrigation ditches and other potential sources of potable water.
Soil RI Analyte: Yes (Copper)
Soil [illegible]A Analyte: Yes (Copper)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 21 C.F.R. § 193.90 (TPFA) -- tolerance of 1 part per million for potable water for residues of copper resulting from the use as algicides or herbicides of basic copper sulfate (and the other copper compounds cited in "Potential Ground Water ARAR" above) to control aquatic plants in reservoirs, lakes, ponds, irrigation ditches and other potential sources of potable water;
(b) 45 Fed. Reg. 79331 (1980) (AWQC) -- 24 hour average is 5.6 μg/l and concentration at any one time should not exceed e (0.94 [In(hardness)]-1.23) (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

25. PRIMARY NAME: DDE (p, p'-Dichlorodiphenylethene)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 2
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 40 C.F.R. § 129.101(a)(3) (TPES) -- 0.001 μg/l
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. § 129.101(a)(3) (TPES) -- 0.001 μg/l; (b) 45 Fed. Reg. 79331 (1980) (AWQC) -- 1,050 μg/l (Aquatic Life).
Biota RI Analyte: Yes
Potential Biota ARAR: No

26. PRIMARY NAME: DDT (p,p'-Dichlorodipenyltrichloroethane)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 2
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 129.101(a)(3) (TPES) -- 10 μg/l; (b) 45 Fed. Reg. 79332 (1980) (AWQC) -- 0.24 ng/l (10^{-5}), 0.024 ng/l (10^{-6}), 0.0024 ng/l (10^{-7}) (Human Health).
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. § 129.101(a)(3) (TPES) -- 10 μg/l; (b) 45 Fed. Reg. 79332 (1980) (AWQC) -- 0.24 ng/l (10^{-5}), 0.024 ng/l (10^{-6}), 0.0024 ng/l (10^{-7}) (Human Health); (c) 45 Fed. Reg. 79331 (1980) (AWQC) -- 24 hour average is 0.0010 μg/l and 1.1 μg/l at any one time (Aquatic Life).
Biota RI Analyte: Yes
Potential Biota ARAR: No

27. <u>PRIMARY NAME</u>: 1,2-Dibromo-3-chloropropane (DBCP, Nemagon, Dibromochloropropane)

CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: 21 C.F.R. § 193.250(a) (TPFA) -- When food additive is present as a result of fumigation in addition to the authorized use of this nematocide, the total residues of inorganic bromides shall not exceed the following: (i) 400 parts per million in or on dried eggs and processed herbs and spices;...(iii) 250 parts per million in or on concentrated tomato products and dried figs; and (iv) 125 parts per million in or on processed foods other than those listed above.

28. PRIMARY NAME: p-Dichlorobenzene (1,4-Dichlorobenzene)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: No
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.50(b) (NPDW -- MCLG) -- 750 µg/l;
(b) 45 Fed. Reg. 79332 (1980) (AWQC) -- 400 µg/l (Human Health)
Soil RI Analyte: No
Soil FS Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: (a) 40 C.F.R. § 141.50(b) (NPDW -- MCLG) -- 750 µg/l;
(b) 45 Fed. Reg. 79332 (1980) (AWQC) -- 400 µg/l (Human Health);
(c) 45 Fed. Reg. 79332 (1980) (AWQC) -- 763 µg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

29. PRIMARY NAME: 1,1-Dichloroethane
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 3
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

30. PRIMARY NAME: 1,2-Dichloroethane
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 2
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 40 C.F.R. § 141.61(a) (NPDW -- MCL); 52 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) -- 5 μg/l
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: 40 C.F.R. § 141.61(a); 52 Fed. Reg. 25716 (1987) (effective Jan 9, 1989) -- 5 μg/l
Biota RI Analyte: No
Potential Biota ARAR: No

31. <u>PRIMARY NAME</u>: 1,1-Dichloroethylene
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR:

(a) 40 C.F.R. § 141.61(a), 52 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 7 µg/l;
(b) 40 C.F.R. § 141.50(b) (NPDW -- MCLG) -- 7 µg/l;
(c) 45 Fed. Reg. 79332 (1980) (AWQC) -- 0.33 µg/l (10^{-5}), 0.033 µg/l (10^{-6}), 0.0033 µg/l (10^{-7}) (Human Health).

Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR:

(a) 40 C.F.R. § 141.61(a), 52 Fed. Reg. 25716 (1987) (effective Jan 9, 1989) (NPDW -- MCL) -- 7 µg/l;
(b) 40 C.F.R. § 141.50(b) (NPDW -- MCLG) -- 7 µg/l;
(c) 45 Fed. Reg. 79332 (1980) (AWQC) -- 0.33 µg/l (10^{-5}), 0.033 µg/l (10^{-5}), 0.0033 µg/l (10^{-7}) (Human Health);
(d) 45 Fed. Reg. 79332 (1980) (AWQC) -- 11,600 µg/l (Aquatic Life).

Biota RI Analyte: No
Potential Biota ARAR: No

32. PRIMARY NAME: 1,2-Dichloroethylene
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.61(a), 52 Fed. Reg. 25716 (1987) (effective Jan 9, 1989) (NPDW -- MCL) -- 7 μg/l;
(b) 45 Fed. Reg. 79332 (1980) (AWQC) -- 0.33 μg/l (10^{-5}), 0.033 μg/l (10^{-6}), 0.0033 μg/l (10^{-7}) (Human Health);

Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: (a) 40 C.F.R. § 141.61(a), 52 Fed. Reg. 25716 (1987) (effective Jan 9, 1989) (NPDW -- MCL) -- 7 μg/l;
(b) 45 Fed. Reg. 79332 (1980) (AWQC) -- 0.33 μg/l (10^{-5}), 0.033 μg/l (10^{-6}), 0.0033 μg/l (10^{-7}) (Human Health);
(c) 45 Fed. Reg. 79332 (1980) (AWQC) -- 11,600 μg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

33. PRIMARY NAME: Dicyclopentadiene (DCPD)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

34. <u>PRIMARY NAME</u>: Dieldrin
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR:
(a) 40 C.F.R. § 129.100(a)(3) (TPES) -- 0.12 $\mu g/l$;
(b) 45 Fed. Reg. 79325 (1980) (AWQC) -- 0.71 ng/l (10^{-5}), 0.071 ng/l (10^{-6}), 0.0071 ng/l (10^{-7}) (Human Health).

Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR:
(a) 40 C.F.R. § 129.100(a)(3) (TPES) -- 0.12 $\mu g/l$;
(b) 45 Fed. Reg. 79325 (1980) (AWQC) -- 0.71 ng/l (10^{-5}), 0.071 ng/l (10^{-6}), 0.0071 ng/l (10^{-7}) (Human Health);
(c) 45 Fed. Reg. 79325 (1980) (AWQC) -- 24 hour average 0.0019 $\mu g/l$ and concentration of 2.5 $\mu g/l$ at any one time (Aquatic Life).

Biota RI Analyte: Yes
Potential Biota ARAR: No

35. PRIMARY NAME: Diisopropyl methyl phosphonate (DIMP, Diisopropylmethylphosphonate)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

36. PRIMARY NAME: 1,4-Dithiane (DITH)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

37. <u>PRIMARY NAME</u>: Endrin

CERCLA Hazardous Substance: Yes

Ranking on ATSDR Priority List: Priority Group 3

Air Analyte: Yes

Potential Air ARAR: No

Ground Water RI Analyte: Yes

Potential Ground Water ARAR:
- (a) 40 C.F.R. § 141.12 (NPDW -- MCL) -- 0.2 $\mu g/l$;
- (b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 0.2 $\mu g/l$;
- (c) 45 Fed. Reg. 79334 (1980) (AWQC) -- 1 $\mu g/l$ (Human Health).

Soil RI Analyte: Yes

Soil EA Analyte: Yes

Potential Soil ARAR: No

Surface Water RI Analyte: Yes

Potential Surface Water ARAR:
- (a) 40 C.F.R. § 141.12 (NPDW -- MCL) -- 0.2 $\mu g/l$;
- (b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 0.2 $\mu g/l$;
- (c) 45 Fed. Reg. 79334 (1980) (AWQC) -- 1 $\mu g/l$ (Human Health);
- (d) 45 Fed. Reg. 79334 (1980) (AWQC) -- 24 hour average 0.0023 $\mu g/l$ and concentration not to exceed 0.18 $\mu g/l$ at any time (Aquatic Life).

Biota RI Analyte: Yes

Potential Biota ARAR: 40 C.F.R. § 180.131 (TPCRAC) -- <u>zero</u> parts per million tolerances for residues in sugarbeets, sugarbeet tops, broccoli, brussels sprouts, cabbage, cauliflower, cottonseed, cucumbers, eggplant, peppers, potatoes, summer squash and tomatoes.

38. PRIMARY NAME: Ethyl benzene (Ethylbenzene)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 4
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 45 Fed. Reg. 79334 (1980) (AWQC) -- 1400 μg/l
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR:
(a) 45 Fed. Reg. 79334 (1980) (AWQC) -- 1400 μg/l;
(b) 45 Fed. Reg. 79334 (1980) (AWQC) -- 32,000 μg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

39. PRIMARY NAME: Fluoride
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR:
(a) 40 C.F.R. § 141.11(c) (NPDW -- MCL) -- 4000 μg/l;
(b) 40 C.F.R. § 141.62(b) (NPDW -- MCL) -- 4000 μg/l;
(c) 40 C.F.R. § 141.50(b) (NPDW -- MCLG) -- 4000 μg/l.
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR:
(a) 40 C.F.R. § 141.11(c) (NPDW -- MCL) -- 4000 μg/l;
(b) 40 C.F.R. § 141.62(b) (NPDW -- MCL) -- 4000 μg/l;
(c) 40 C.F.R. § 141.50(b) (NPDW -- MCLG) -- 4000 μg/l.
Biota RI Analyte: No
Potential Biota ARAR: No

40. PRIMARY NAME: Isodrin
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

41. PRIMARY NAME: Lead
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: 40 C.F.R. § 50.12 (NAAQS) -- 1.5 micrograms per cubic meter, maximum arithmetic mean averaged over a calendar quarter
Ground Water RI Analyte: Yes
Potential Ground Water ARAR:
(a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) 45 Fed. Reg. 79336 (1980) (AWQC) -- 50 μg/l (Human Health).

Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR:
(a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 50 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 50 μg/l;
(c) 45 Fed. Reg. 79336 (1980) (AWQC) -- 50 μg/l (Human Health);
(d) 45 Fed. Reg. 79336 (1980) (AWQC) -- 24 hour limit to not exceed e (2.35 [In(hardness)] - 9.48) and concentration at any one time to not exceed e (1.22 [In(hardness)] - 0.47] (Aquatic Life).

Biota RI Analyte: No
Potential Biota ARAR: No

42. <u>PRIMARY NAME</u>: Magnesium
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

43. <u>PRIMARY NAME</u>: Magnesium hydroxide
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Magnesium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

44. <u>PRIMARY NAME</u>: Mercuric chloride
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes (Mercury)
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Mercury)
Potential Ground Water ARAR: (a) (Mercury) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 2 μg/l;
(b) (Mercury) 45 Fed. Reg. 79336-79337 (1980) (AWQC) -- 144 ng/l (Human Health).

Soil RI Analyte: Yes (Mercury)
Soil EA Analyte: Yes (Mercury)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Mercury)
Potential Surface Water ARAR: (a) (Mercury) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 2 μg/l;
(b) (Mercury) 45 Fed. Reg. 79336-79337 (1980) (AWQC) -- 144 ng/l (Human Health);
(c) (Mercury) 45 Fed. Reg. 79336 (1980) (AWQC) -- 0.00057 μg/l (as a 24-hour average and the concentration should not exceed 0.0017 μg/l at any one time) (Aquatic Life).

Biota RI Analyte: No
Potential Biota ARAR: No

45. PRIMARY NAME: Mercury
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 2
Air Analyte: Yes
Potential Air ARAR:
(a) 40 C.F.R. § 61.52(a) (NESHAP) -- emissions to atmosphere from mercury ore processing facilities not to exceed 2300 grams per 24-hour period;
(b) 40 C.F.R. § 61.52(b) (NESHAP) -- emissions to atmosphere from sludge incineration or drying plants not to exceed 3200 grams per 24-hour period.

Ground Water RI Analyte: Yes
Potential Ground Water ARAR:
(a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 2 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 2 μg/l;
(c) 45 Fed. Reg. 79336-79337 (1980) (AWQC) -- 144 ng/l (Human Health).

Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR:
(a) 40 C.F.R. § 141.11(b) (NPDW -- MCL) -- 2 μg/l;
(b) 40 C.F.R. § 264.94(a)(2) (RCRA) -- 2 μg/l;
(c) 45 Fed. Reg. 79336-79337 (1980) (AWQC) -- 144 ng/l (Human Health);
(d) 45 Fed. Reg. 79336-79337 (1980) (AWQC) -- 24 hour average 0.00057 μg/l and concentration not to exceed 0.0017 μg/l at any one time (Aquatic Life).

Biota RI Analyte: No
Potential Biota ARAR: No

46. PRIMARY NAME: Nitrate
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 40 C.F.R. § 141.11(b) (NPDW--MCL) -- 10,000 μg/l
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: 40 C.F.R. § 141.11(b) (NPDW--MCL) -- 10,000 μg/l
Biota RI Analyte: No
Potential Biota ARAR: No

47. PRIMARY NAME: Nitrite
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: No
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

48. PRIMARY NAME: 1,4-Oxathiane (p-Thiozane)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

49. PRIMARY NAME: Sodium
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

50. PRIMARY NAME: Sodium bicarbonate, 1:1
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

51. PRIMARY NAME: Sodium bromate
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

52. PRIMARY NAME: Sodium carbonate, 2:1
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

53. PRIMARY NAME: Sodium methylate, alcohol mixture
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

54. PRIMARY NAME: Sodium nitrite
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

55. PRIMARY NAME: Sodium silicate
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

56. PRIMARY NAME: Sodium sulfite, 2:1
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

57. PRIMARY NAME: Sodium sulfonate
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

58. PRIMARY NAME: Sodium thiosulfate (Hypo)
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Sodium)
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

59. PRIMARY NAME: Sulfate
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

60. PRIMARY NAME: Sulfonic acid
CERCLA Hazardous Substance: No
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: No
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

61. PRIMARY NAME: p,p'-TDE
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: No
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: 45 Fed. Reg. 79331 (1980) (AWQC) -- 0.6 μg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

62. PRIMARY NAME: Tetrachlorobenzene (1,2,4,5-Tetrachlorobenzene)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: No
Potential Ground Water ARAR: 45 Fed. Reg. 79327 (1980) (AWQC) -- 38 μg/l (Human Health)
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: (a) 45 Fed. Reg. 79327 (1980) (AWQC) -- 38 ug/l (Human Health);
(b) 45 Fed. Reg. 79327 (1980) (AWQC) -- 250 ug/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

63. PRIMARY NAME: 1,1,2,2-Tetrachloroethane
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: No
Potential Air ARAR: No
Ground Water RI Analyte: No
Potential Ground Water ARAR: No
Soil RI Analyte: No
Soil EA Analyte: No
Potential Soil ARAR: No
Surface Water RI Analyte: No
Potential Surface Water ARAR: No
Biota RI Analyte: No
Potential Biota ARAR: No

64. PRIMARY NAME: 1,1,2,2-Tetrachloroethylene (Perchloroethylene, PCE)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 45 Fed. Reg. 79341 (1980) (AWQC) -- 8 $\mu g/l$ (10^{-5}), 0.8 $\mu g/l$ (10^{-6}), 0.08 $\mu g/l$ (10^{-7}) (Human Health)
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 45 Fed. Reg. 79341 (1980) (AWQC) -- 8 $\mu g/l$ (10^{-5}), 0.8 $\mu g/l$ (10^{-6}), 0.08 $\mu g/l$ (10^{-7}) (Human Health);
(b) 45 Fed. Reg. 79341 (1980) (AWQC) - 840 $\mu g/l$ (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

65. PRIMARY NAME: Toluene
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 2
Air Analyte: Yes
Potential Air ARAR: 45 Fed. Reg. 79340 (1980) (AWQC) -- 14,300 $\mu g/l$ (Human Health)
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 45 Fed. Reg. 79340 (1980) (AWQC) -- 14,300 $\mu g/l$ (Human Health);
(b) 45 Fed. Reg. 79340 (1980) (AWQC) -- 17,500 $\mu g/l$ (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

66. PRIMARY NAME: 1,1,1-Trichloroethane
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 3
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.50 (NPDW -- MCLG) -- 200 μg/l;
(b) 40 C.F.R. § 141.61(a); 52 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 200 μg/l.
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 40 C.F.R. § 141.50 (NPDW -- MCLG) -- 200 μg/l;
(b) 40 C.F.R. § 141.61(a); 52 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 200 μg/l.
Biota RI Analyte: No
Potential Biota ARAR: No

67. PRIMARY NAME: Trichloroethylene (Trichloroethene, TCE)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 1
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: (a) 40 C.F.R. § 141.61(a); 52 Fed. Reg. 25716 (1987) (effective Jan. 9, 1989) (NPDW -- MCL) -- 5 μg/l;
(b) 45 Fed. Reg. 79341 (1980) (AWQC) -- 27 μg/l (10^{-5}), 2.7 μg/l (10^{-6}), 0.27 μg/l (10^{-7}) (Human Health).
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: (a) 45 Fed. Reg. 79341 (1980) (AWQC) -- 27 μg/l (10^{-5}), 2.7 μg/l (10^{-6}), 0.27 μg/l (10^{-7}) (Human Health);
(b) 45 Fed. Reg. 79341 (1980) (AWQC) -- 45,000 μg/l (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

68. PRIMARY NAME: Xylene (includes m,o, p-Xylene)
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 3
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: 40 C.F.R. § 180.1025(c) (TPCRAC) -- Xylene is not to be applied to irrigation conveyances where there is any likelihood that the irrigation water will be used as a source of potable water, or that return flows to rivers and streams could contain residues of Xylene in excess of 10 parts per million.
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: 40 C.F.R. § 180.1025(c) (TPCRAC) -- Xylene is not to be applied to irrigation conveyances where there is any likelihood that the irrigation water will be used as a source of potable water, or that return flows to rivers and streams could contain residues of Xylene in excess of 10 parts per million.
Biota RI Analyte: No
Potential Biota ARAR: No

69. PRIMARY NAME: Zinc
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: Priority Group 2
Air Analyte: Yes
Potential Air ARAR: No
Ground Water RI Analyte: Yes
Potential Ground Water ARAR: No
Soil RI Analyte: Yes
Soil EA Analyte: Yes
Potential Soil ARAR: No
Surface Water RI Analyte: Yes
Potential Surface Water ARAR: 45 Fed. Reg. 79341 (1980) (AWQC) -- 24 hour average is 47 μg/l and should not exceed e (0.83[In(hardness)] + 1.95) at any one time (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

70. PRIMARY NAME: Zinc oxide
CERCLA Hazardous Substance: Yes
Ranking on ATSDR Priority List: No
Air Analyte: Yes (Zinc)
Potential Air ARAR: No
Ground Water RI Analyte: Yes (Zinc)
Potential Ground Water ARAR: No
Soil RI Analyte: Yes (Zinc)
Soil EA Analyte: Yes (Zinc)
Potential Soil ARAR: No
Surface Water RI Analyte: Yes (Zinc)
Potential Surface Water ARAR: 45 Fed. Reg. 79341 (1980) (AWQC-Zinc) -- 24 hour average is 47 μg/l and should not exceed e (0.83 [In(hardness)] + 1.95) at any one time (Aquatic Life).
Biota RI Analyte: No
Potential Biota ARAR: No

RESPONSES TO COMMENTS ON

CHEMICAL-SPECIFIC ARARs

FOR THE OFF-POST OPERABLE UNIT

RESPONSES TO COMMENTS ON CHEMICAL SPECIFIC ARARs FOR THE OFF-POST OPERABLE UNIT

1. SHELL COMMENTS ON THE PROPOSED ARARS FOR THE OFF-POST OPERABLE UNIT

A. SHELL GENERAL COMMENTS:

Shell's comments on the potential chemical-specific ARARs may be categorized into the following general issues:

1. The use of standards based upon EPA Carcinogen Assessment Group (CAG) methodologies;

2. The use of MCLs;

3. The use of MCLGs;

4. The use of Ambient Water Quality Criteria (AWQC);

5. The use of RCRA permit conditions;

6. The use of National Emission Standards for Hazardous Air Pollutants (NESHAPS);

7. The use of EPA and FDA action levels and tolerances for agricultural commodities;

8. The application points for ARARs.

Comments which have been submitted to the Army on previous occasions regarding these issues are summarized below.

Shell General Comments on the Use of Standards Based on EPA CAG Methodologies:

As expressed to the Army on numerous occasions, CAG methodology is premised on invalid assumptions. EPA has stated that performing a quantitative assessment should never appear to remove the underlying uncertainty in the quality of evidence. The displayed "upper-limit risk" therefore should be accompanied, where appropriate, with explicit acknowledgment that the agent may not be a human carcinogen at all, and that there may be zero risk of cancer to humans due to exposure. Moreover, it should be made clear to the reader that there is currently no way to decide whether the upper-bound value for risk is more or less likely to be the true risk than the lower-bound value (zero). See letter for Edward J. McGrath to Donald L. Campbell, May 12, 1988.

The linearized multistage model used by the CAG leads to a plausible upper limit to the risk that is consistent with some proposed mechanism of carcinogenesis. Such an estimate, however, does not necessarily give a realistic prediction of the risk. The value of the risk is unknown, and may be as low as zero. 51 Fed. Reg. 33997-33998 (September 24, 1986).

The choice of which low-dose extrapolation model to use and the animal data set to utilize in the model to derive estimates of upper-bounds of risk are not matters currently settled by science. EPA recognizes that "risks at low exposure levels cannot be measured directly by either animal experiments or mathematical models . . . a number of mathematical models have been developed to extrapolate from high to low dose." No single mathematical procedure is recognized as the most appropriate for low-dose extrapolation in carcinogenesis. 51 Fed. Reg. 33992-34003, (September 24, 1986). For several reasons, the unit cancer risk estimate based on animal bioassays is only an approximate indication of the absolute risk in populations exposed to carcinogens. See EPA, The Endangerment Assessment Handbook, August 1985. Different extrapolation models and data sets may lead to large differences in estimates of upper-bound risk at low doses and, even if one accepts the data as a basis for modeling, such modeling generates a widely diverse range of risk estimates depending on the model used. CAG selects data sets and models so as to derive unnecessarily conservative estimates of the upper-bound of risk. See letter from Edward J. McGrath to Donald L. Campbell, May 12, 1988.

Response to Shell General Comments on the Use of Standards Based on EPA CAG Methodologies:

While the Army recognizes that Shell is dissatisfied with the regulations, standards, criteria or limitations that have been set, in whole or in part, pursuant to the CAG methodology, it is the Army's position that this is not the appropriate context to debate the merits of the CAG methodology that produced such regulations, standards, criteria or limitations. Shell has already had an opportunity to raise its CAG methodological concerns with EPA's Cancer Assessment Group. If EPA hereafter determines to modify the CAG methodology prior to the issuance of the Off-Post RMA ROD, such modification(s) will be applied in each pertinent instance to the substances identified herein for the Off-Post RMA Operable Unit. Until such time, the Army will not look behind or question the CAG methodology that produced any of the chemical-specific regulations, standards, criteria or limitations identified as potential ARARs in this appendix.

Shell General Comments on the Use of MCLGs:

Shell does not believe that it is necessary for MCLGs to be considered as potential ARARs. Only MCLs, not MCLGs, are required to be met at the point of human consumption for drinking water. It is our understanding that the use of MCLGs as potential ARARs is undergoing internal review by EPA. At some future time when

EPA reports a decision on this matter, Shell may submit additional comments regarding the use of MCLGs as the basis of potential ARARs.

Furthermore, MCLGs for carcinogens are usually set at zero based on EPA CAG methodologies. The current CAG methodology uses potency measures, such as unit risk and relative risks, which are based on upper bounds and not on fitted model values. These measurements do not differentiate between carcinogens on the basis of available experimental data about the shapes of the dose-response relationship. The inability to differentiate between risks is a serious deficiency in CAG methodology. Therefore, the use of MCLGs as potential ARARs is generally inappropriate.

Response to Shell General Comments on the Use of MCLGs:

Non-zero MCLGs are identified as potential ARARs for purposes of this appendix in order to ensure that the decisionmaking process for the Off-Post Operable Unit will take into account all regulations, standards, criteria or limitations that bear a clean-up relationship to the chemicals found off-post from RMA, irrespective of whether such regulations, standards, criteria or limitations are ultimately selected as ARARs. If EPA hereafter determines to issue new guidance on the use of MCLGs prior to the issuance of the Off-Post RMA ROD, such guidance will be applied accordingly in each pertinent instance to the substances identified for the Off-Post RMA Operable Unit.

Shell's CAG-related concerns are addresses in the preceding comment.

Shell General Comments on the Use of Ambient Water Quality Criteria:

Shell has previously rejected Army proposals for groundwater ARARs based on Ambient Water Quality Criteria (AWQC). See letter from Edward J. McGrath to Charles Scharmann, June 21, 1988, commenting on IRA North of RMA. Shell has also submitted comments to the Army stating that the aquatic life values are merely published as guidance, and do not constitute an Ambient Water Quality Criterion. See letter of Edward J. McGrath to Donald L. Campbell, June 17, 1988. In many instances, the values cited by the Army as the basis of proposed ARARs are based upon the assumption of factors for the human consumption of drinking water and aquatic life. Naturally, fish are not collected from groundwater. Therefore, aquatic life values cannot be potential ARARs for groundwater on the RMA. See also Colorado Basic Standards and Methodologies at 5 CCR 1002-8.

Shell appreciates the consideration being given to these difficult issues by the Army, as reflected in the following footnote:

> It should be noted that whether the AWQC values designated herein as potential groundwater ARARs are appropriate for utilization as ARARs is a matter that warrants serious consideration during the course of Endangerment Assessment decisionmaking. Since the indicated AWQC values are predicated on human consumption both of water and aquatic

organisms in that water, and groundwater does not contain aquatic life, use of alternative values (such as the adjusted AWQC found in the 1986 Superfund Public Health Evaluation Manual) may well be more appropriate in connection with groundwater.

Volume III, Appendix H at vi.

Response to Shell General Comments on the Use of Ambient Water Quality Criteria:

The Army's position remains as set forth in Footnote No. 1 of the appendix.

Non-zero Ambient Water Quality Criteria are identified as potential ARARs for purposes of this appendix in order to ensure that they will be taken into account for possible future use in setting cleanup levels, irrespective of whether such Ambient Water Quality Criteria are ultimately selected as ARARs for use in the Off-Post RMA Operable Unit.

Shell General Comments on the Use of RCRA Permit Conditions:

Shell has commented previously on the Army proposal of chemical-specific ARARs based on 40 CFR § 264.94(a)(2). These standards in this section are the same as the MCLs. Shell has previously set forth its position on the use of MCLs at the Arsenal boundaries. The levels in 40 CFR § 264.94(a)(2) are intended to trigger corrective action at RCRA TSD facilities. Since the Arsenal is being remediated pursuant to CERCLA, we do not believe that Section 264.94(a)(2) can be a potential ARAR. See letter from Edward J. McGrath to Donald L. Campbell, August 30, 1988.

Response to Shell General Comments on the Use of RCRA Permit Conditions:

While the On-Post and Off-Post RMA Operable Units are being remediated pursuant to CERCLA, it is nevertheless proper to consider as potential CERCLA cleanup standards all regulations, standards, criteria or limitations that bear a relationship to the identified chemicals, including those found in the RCRA regulations. Thus, RCRA regulations are identified as potential ARARs for purposes of this appendix in order to ensure that they will be taken into account for possible future use in setting cleanup levels, irrespective of whether such regulations are ultimately selected as ARARs for use in the Off-Post Operable Unit.

Shell General Comments on the Use of National Emission Standards for Hazardous Air Pollutants (NESHAPS):

NESHAPS are source-specific and chemical-specific air emission standards which have been promulgated under the Clean Air Act. The standards are intended to be applied to emissions from a "stationary source" such as a stack in a particular industry. It is therefore clearly inappropriate to use NESHAPS as the basis of ARARs at RMA.

Chemical-specific ARARs have been listed in Appendix H for any compound believed to be present in the air, surface water, groundwater, or soil. Potential ARARs are listed, however, for compounds for which there is unquestionable proof of their presence. For example, in the case of endrin the following statement is made:

> [A]t all other wells, duplicate samples consistently reproduced concentrations less than CRLs.
>
> Volume I at 3-101.

A similar argument could be made for tetrachloroethylene and trichloroethylene. See Volume I at 3-81.

Response to Shell Comments on the Use of the National Emission Standards for Hazardous Air Pollutants:

NESHAP's regulations are identified in this context in order to ensure full consideration as possible CERCLA cleanup standards all regulations, standards, criteria or limitations that bear a relationship to the identified chemicals, including those found in the NESHAP's regulations. Thus, NESHAP's regulations are identified as potential ARARs for purposes of this appendix irrespective of whether such regulations are well-suited or ultimately selected as ARARs for use in the Off-Post Operable Unit.

ARARs will be selected for all chemicals from RMA found in the recent past in Off-Post air, surface water, groundwater, soil or biota.

B. SHELL CHEMICAL-SPECIFIC COMMENTS ON APPENDIX H

Shell Comments on Aldrin:

PROPOSED GROUNDWATER ARAR:

Shell disagrees with the Army proposal of 0.003 $\mu g/l$ as an ARAR, which is the ambient water criterion for aldrin/dieldrin in navigable waters based on an FDA tolerance level of 0.3 ppm for fish times an application factor of 0.01. 40 C.F.R. § 129.100 (a)(3).

Shell also disagrees with an assumption underlying this criterion. That assumption is that "there is no demonstrated 'no effect level'." See 41 Fed. Reg. 23,584 (1976). As Shell has previously explained in comments, developments in modelling, such as those by Sielken, indicate that this assumption is invalid. In addition, a water quality criterion designed to provide for protection of aquatic life is not relevant and appropriate. The criterion was intended to address the impact of bioaccumulation in fish and their food sources on the biological transport of aldrin/dieldrin to birds and to mammals, including man. 41 Fed. Reg. 23,584 (1976).

Furthermore, aldrin and dieldrin are considered by the EPA CAG to be an animal carcinogen and a suspected human carcinogen. As stated in previous comments, numerous carcinogenicity tests in a variety of animals indicate that aldrin and dieldrin promote <u>only</u> liver tumors and the tumors develop <u>only</u> in mice. On the basis of this species-specific effect, aldrin and dieldrin are improperly categorized by the EPA as animal carcinogens.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposal of 3.0 $\mu g/l$ as an ARAR. The aquatic life value published at 45 Fed. Reg. 79325 is merely guidance, and does not constitute an ambient Water Quality Criterion. See 45 Fed. Reg. at 79,322 ("The aquatic life criteria specify both maximum and 24-hour average values. In those cases where there were insufficient data to allow the derivation of a criterion, narrative descriptions of apparent threshold levels for acute and/or chronic effects based on the available data are presented. These descriptions are intended to convey a sense of the degree of toxicity of the pollutant in the absence of a criterion recommendation.").

Shell questions why the Army did not consider the State surface water standard for Aldrin (.003 $\mu g/l$) promulgated pursuant to the Colorado Water Quality Control Act as a potential ARAR. <u>See</u> 5 Colo. Code Reg. 1002-8 3.8.5(2) hereinafter referred to as "South Platte Organics Standards" (1987).

<u>Response to Shell Comments on Aldrin:</u>

In this appendix, the Army has only designated potential ARARs for Aldrin. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

The Army did not consider the South Platte Organics Standards for Aldrin because the State standard is not more stringent than the designated potential Federal ARARs and the Army is unable to determine from presently available information whether the standard was properly promulgated or could effectively result in the statewide prohibition of land disposal (where the standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations).

Shell Comments on (3) Arsenic and (4) Arsenic trioxide:

Air ARAR:

Shell disagrees with the Army proposal of arsenic concentrations in air of 2.5 mg/year and less than 0.4 mg per year based on 40 CFR Section 61.162(b)(1) and 40 CFR § 61.162(b)(1), respectively.

Shell disagrees with the Army proposal of uncontrolled arsenic emissions of 2.5 mg per year as an ARAR. The National Emission Standard for Inorganic Arsenic Emissions from Glass Manufacturing Plants is neither applicable nor relevant and appropriate. See 40 CFR § 61.160-162(a)(j). Shell disagrees with the Army proposal of 0.4 mg per year of uncontrolled arsenic emissions from new or modified glass melting furnaces as an ARAR, because the National Emission Standard for Inorganic Arsenic Emissions from Glass Manufacturing Plants is neither applicable nor relevant and appropriate because commercial arsenic is not used in any remediation processes. See 40 CFR § 61.160-162(b)(1). In addition to other difficulties in using such standards as ARARs, the theoretical arsenic emissions factor is expressed as the amount of arsenic, expressed in grams per kilogram of glass produced, as determined on a material balance.

Proposed Groundwater ARAR:

Shell agrees with the Army proposal of the MCL of 50 $\mu g/l$ as an ARAR. The National Academy of Sciences Drinking Water Committee, NAS, and the World Health Organization, WHO, have prepared recommendations and guidelines, respectively, for inorganic contaminant in drinking water, based upon non-carcinogenic, no observed adverse effects levels in humans with considerations for a margin of safety. The MCL is based upon guidance from these organizations and upon reasonable scientific studies and peer reviews of these studies.

The State Human Health standard is the same as the MCL, and is therefore not more stringent than the Federal standard.

Shell disagrees with the Army proposal of 50 $\mu g/l$ as an ARAR based on 40 CFR § 264.94(a)(2) for the reasons set forth above.

Shell disagrees with the Army proposal of 22 $\mu g/l$ as an ARAR. The aquatic life value published at 45 Fed. Reg. 79325 is merely guidance, and does not constitute an AWQC.

Proposed Surface Water ARAR:

Shell disagrees with the proposed ARARs for the reasons stated above regarding our concerns with the CAG methodology.

Response to Shell Comment on (3) Arsenic and (4) Arsenic trioxide:

In this appendix, the Army has only designated potential ARARs for Arsenic and Arsenic trioxide. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army has designated the NESHAP's standard for arsenic as a potential ARAR for Arsenic and Arsenic trioxide because it warrants consideration as a possible guideline for use in controlling Arsenic emissions during the course of remediation. Whether this standard has any practical application in the context of the cleanup will be determined in the Feasibility Study/Endangerment Assessment for the Off-Post RMA Operable Unit.

The designation of 50 $\mu g/l$ (40 C.F.R. § 264.94(a)(2)) as a potential ARAR for a CERCLA cleanup is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance that is not inconsistent with CERCLA and the NCP.

As discussed above, Shell's concerns with CAG methodology do not properly arise in this context.

The balance of Shell's comment concerns the areas of its agreement with the Army's initial determination and thus requires no further discussion in this context.

6. Shell Comments on Benzene:

Potential Groundwater ARAR:

Shell disagrees with the Army proposal of the MCL of 5 $\mu g/l$ as an ARAR. The benzene MCL is based on CAG methodology and is therefore unacceptable for the reasons outlined above in the general comments.

Shell disagrees with the Army proposal of the AWQC of 6.6 $\mu g/l$ as an ARAR. The aquatic life value published in 45 Fed. Reg 79326 is merely guidance, and does not constitute an AWQC. Furthermore, this guidance is based upon CAG methodologies, and therefore unacceptable for the reasons outlined above in the General Comments.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposal of 5,300 $\mu g/l$ as an ARAR. The Aquatic Life value published at 45 Fed. Reg. 79326 is merely guidance, and does not constitute an ambient Water Quality Criterion.

Response to Shell Comments on Benzene:

In this appendix, the Army has only designated potential ARARs for Benzene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each relevant instance to the substances identified herein.

7. Shell Comments on Cadmium:

Proposed Groundwater ARAR:

Shell agrees with the Army proposal of 10 $\mu g/l$ as an ARAR for the reasons outlined in the arsenic comment.

The State Human Health standard is the same as and is based on the MCL and is therefore not an ARAR

Shell disagrees with the Army proposal of 50 $\mu g/l$ as an ARAR based upon 40 C.F.R. 264.94(a)(2) for the reasons stated above in the discussion of RCRA permit conditions.

Proposed Surface Water ARAR:

Shell tentatively accepts the Army proposal of the AWQC (Aquatic Life) standard (max: e (1.05 [In hardness)] -3.73) as a potential ARAR. Shell questions why the Army did not consider the State surface water standard for cadmium (0.001 $\mu g/l$) as a potential ARAR. See discussion of Ambient Water Quality Criteria.

For reasons stated above in the discussion of RCRA permit conditions, Shell disagrees with 40 CFR § 264.94(a)(2).

Response to Shell Comments on Cadmium:

In this appendix, the Army has only designated potential ARARs for Cadmium. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment for the Off-Post Operable Unit.

Shell's first, second and fourth comments concern its tentative agreement with the Army's initial determination for Cadmium and thus requires no further discussion in this context.

The Army's designation of 50 $\mu g/l$ (40 C.F.R. § 264.94(a)(2)) as a potential ARAR for a CERCLA cleanup is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance that is not inconsistent with CERCLA and the NCP.

The Army did not consider the State surface water standard for Cadmium to be a potential ARAR because the Army is unable to determine from presently available information whether the State standard was properly promulgated or could effectively result in the statewide prohibition of land disposal (where the standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations).

12. Shell Comments on Carbon Tetrachloride:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of the MCL of 5 $\mu g/l$ as an ARAR. The carbon tetrachloride MCL is based on CAG methodology and is therefore unacceptable for the reasons set forth above.

Shell also disagrees with the use of the AWQC of 4 $\mu g/l$ as an ARAR for carbon tetrachloride, because this value is based on CAG methodology, and is therefore unacceptable for the reasons set forth above.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposal of the MCL of 5 $\mu g/l$ as an ARAR. The carbon tetrachloride MCL is based on CAG methodology, and is therefore unacceptable for the reasons set forth above.

Shell disagrees with the Army proposal of 32,200 $\mu g/l$ as an ARAR. The aquatic life value published at 45 Fed. Reg. 79327 is merely guidance, and does not constitute an ambient Water Quality Criterion.

Response to Shell Comments on Carbon Tetrachloride:

In this appendix, the Army has only designated potential ARARs for Carbon Tetrachloride. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

14. Shell Comments on Chlorinated phenol:

PROPOSED SURFACE WATER ARAR:

Shell disagrees with the Army proposal of 500,000 μg/l as an ARAR. The aquatic life value published at 45 Fed. Reg. 79329 is merely guidance, and does not constitute an ambient Water Quality Criterion.

Response to Shell Comments on Chlorinated phenol:

In this appendix, the Army has only designated potential ARARs for Chlorinated phenol. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The use of AWQC as potential ARARs is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

15. Shell Comments on Chlorobenzene:

PROPOSED GROUNDWATER ARAR:

The value cited by the Army is incorrect. The human health AWQC for chlorobenzene, as reported at 45 Fed. Reg. 79327-28, is 488 μg/l. This value has been derived from non-referenced sources for the protection of human health. The references do not advise the reader on the toxicological endpoints considered or the assumptions incorporated in performing the calculations for values protective of human health. Furthermore, the standard attempts to protect biota in surface water, which may not be appropriate for groundwater. We therefore disagree with the proposed ARAR of 448 μg/l.

PROPOSED SURFACE WATER ARAR:

Shell disagrees with the Army proposal of 250 μg/l as an ARAR. The aquatic life value published at 45 Fed. Reg. 79237 is merely guidance, and does not constitute an ambient Water Quality Criterion.

Response to Shell Comments on Chlorobenzene:

In this appendix, the Army has only designated potential ARARs for Chlorobenzene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The human health AWQC for groundwater (488 $\mu g/l$) was correct and thus no change was necessary to this appendix.

The use of the AWQC as potential ARARs is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

16. Shell Comments on Chloroform:

PROPOSED GROUNDWATER ARAR:

Shell tentatively accepts the MCL of 100 $\mu g/l$ as the proposed MCL. The MCL is based upon the median range of chloroform concentrations in U.S. drinking water pursuant to an EPA study.

Shell disagrees with the Army proposal of 1.9 $\mu g/l$ (10^{-5}) as an ARAR. The aquatic life value published at 45 Fed. Reg. 79330 is merely guidance, and does not constitute an AWQC. Furthermore, the AWQC is based on the underlying assumption that there is no threshold level and is premised on CAG methodology.

Response to Shell Comments on Chloroform:

In this appendix, the Army has only designated potential ARARs for Chloroform. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's initial comment concerns its tentative agreement with the Army's initial determination for Chloroform and thus requires no further discussion in this context.

Shell's second comment concerns the appropriateness of the AWQC aquatic life value as a potential ARAR. Use of such guidance as a potential ARAR is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

As discussed above, Shell's concerns with CAG methodology do not properly arise in this context.

17. p-Chlorophenyl methyl sulfide

18. p-Chlorophenyl methyl sulfone

19. p-Chlorophenyl methyl sulfoxide

PROPOSED SURFACE WATER ARAR:

Shell tentatively accepts the Army proposal of the AWQC standard of 4,380 ng/l as potential ARAR for these three compounds.

Response to Shell Comments on p-Chlorophenyl methyl sulfide, p-Chlorophenyl sulfone and p-Chlorophenyl methyl sulfoxide:

In this appendix, the Army has only designated potential ARARs for p-Chlorophenyl methyl sulfide, p-Chlorophenyl sulfone and p-Chlorophenyl methyl sulfoxide. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's comment concerning its tentative acceptance of the Army's initial determination for these three compounds requires no further discussion in this context.

20. Shell Comments on Chromium:

PROPOSED GROUNDWATER ARAR:

Shell agrees with the Army proposal of the MCL of 50 $\mu g/l$ as an ARAR for the reasons outlined in the arsenic comment. The State Human Health standard is the same as and is based on the MCL and is therefore not an ARAR.

Shell disagrees with the Army proposal of 50 $\mu g/l$ as an ARAR based upon 40 CFR § 264.94(a)(2) for the reasons set forth above for the reasons stated in the discussion of RCRA permit conditions.

PROPOSED SURFACE WATER ARAR:

Shell tentatively accepts the Army proposal of the AWQC (Aquatic Life) standard as a potential ARAR. Shell questions why the Army did not consider the State surface water standards for Cr III (50 $\mu g/l$) and Cr VI (25 $\mu g/l$) as potential ARARs. See discussion of Ambient Water Quality Criteria.

Shell disagrees with the Army proposal 50 $\mu g/l$ as an ARAR based upon 40 CFR § 294.94(a)(2) for the reasons set forth above for the reasons stated in the discussion of RCRA permit condition.

Response to Shell Comments on Chromium:

In this appendix, the Army has only designated potential ARARs for Chromium. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's comments concern it agreement with and tentative acceptance of the Army's initial determination for Chromium and thus requires no further discussion in this context.

The Army did not consider the State surface water standard for Chromium III to be a potential ARAR because it is not more stringent than the designated potential Federal ARARs and because the Army is unable to determine from presently available information whether the standard was properly promulgated or could effectively result in the statewide prohibition of land disposal (where the standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations). The State surface water standard for Chromium VI was not determined to be a potential ARAR because the Army is unable to determine from presently available information whether the standard was properly promulgated or could effectively result in the statewide prohibition of land disposal (where the standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations).

The designation of 50 μg/l (40 C.F.R. § 264.94(a)(2)) as a potential ARAR for a CERCLA cleanup is not inconsistent with CERCLA, the NCP and EPA guidance that is not inconsistent with CERCLA and the NCP.

21. Shell Comments on Chromium III:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of the AWQC of 0.170 μg/1 as an ARAR based upon the AWQC. The aquatic life value published at 45 Fed. Reg. 79331 is merely guidance and does not constitute an AWQC.

Proposed Surface Water ARAR:

Shell does agree with the Army's proposed ARARs for surface water.

Response to Shell Comments on Chromium III:

In this appendix, the Army has only designated potential ARARs for Chromium III. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's initial comment concerns the appropriateness of the AWQC aquatic life value as a potential ARAR for Chromium III. Use of such guidance is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

Shell's second comment concerns its agreement with the Army's proposed ARARs for surface water and thus requires no further discussion in this context.

22. Shell Comments on Chromium VI:

PROPOSED GROUNDWATER ARAR:

Shell disagrees with the Army proposal of the AWQC of 50 $\mu g/l$ as an ARAR for the reasons set forth above. Shell does agree with the MCL as a groundwater ARAR/surface groundwater ARAR: Shell also agrees with the Army's proposed ARARs for surface water for chromium VI for the reasons set forth above. See discussion of AWQC.

Response to Shell Comments on Chromium VI:

In this appendix, the Army has only designated potential ARARs for Chromium VI. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's initial comment expresses disagreement with the appropriateness of the AWQC aquatic life value as a potential ARAR for Chromium VI. Use of such guidance to designate a potential ARAR is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

The remainder of Shell's comments concern its agreement with the Army's other designated potential ARARs and thus requires no further discussion in this context.

Shell Comments on (23) Copper and (24) Copper Sulfate

PROPOSED SURFACE WATER ARAR:

Shell disagrees with the Army proposal of 1 ppm for potable water for residues of copper based upon 21 CFR § 193.90 for the reasons set forth above. See discussion of TPFA.

PROPOSED GROUNDWATER ARAR:

Shell agrees with the Army in not selecting the State Water Quality Standards for Secondary Drinking Water (1 mg/l) and Agricultural (.2 mg/l) uses as potential ARARs. The secondary drinking water standard is premised on the AWQC for human health (1 mg/l) which is based upon organoleptic data. Organoleptic concerns do not relate to protection of public health and environment and the agricultural value is not based on human health concerns.

PROPOSED SURFACE WATER ARAR:

Shell tentatively agrees with the Army proposal of the AWQC (Aquatic Life) standard as a potential ARAR. Shell questions why the Army did not consider the State surface water standard for Copper (25 $\mu g/l$) as a potential ARAR. See discussion of Ambient Water Quality Criteria.

<u>Response to Shell Comments on (23) Copper and (24) Copper sulfate</u>:

In this appendix, the Army has only designated potential ARARs for Copper and Copper sulfate. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army's use of the standard for residues of Copper (21 C.F.R. § 193.90) as a potential ARAR is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP. Whether such standard has any practical utility in this context will be determined in the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The balance of Shell's comments concern its agreement and tentative agreement with the Army's initial determination for Copper and Copper sulfate and thus requires no further discussion in this context.

The State surface water standard for Copper was not determined to be a potential ARAR because it is not more stringent than the designated potential Federal ARARs and because the Army is unable to determine from presently available information whether the standard was properly promulgated or could effectively result in the statewide prohibition of land disposal (where the standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations).

25. Shell Comments on DDE:

PROPOSED GROUNDWATER ARAR:

Shell disagrees that the AWQC of 0.001 $\mu g/l$ should be selected as an ARAR based on 40 CFR 120.101(a)(3) for the reasons set forth above in the discussion of AWQC.

PROPOSED SURFACE WATER ARAR:

Shell disagrees with the Army proposal of 1,050 $\mu g/l$ as an ARAR. The aquatic life value published at 45 Fed. Reg. 79331 is merely guidance, and does not constitute an ambient water quality criterion. Shell questions why the Army did not consider the State surface water standard for DDE (.001 $\mu g/l$) as a potential ARAR. See South Platte Organics Standards.

Response to Shell Comments on DDE:

In this appendix, the Army has only designated potential ARARs for DDE. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's comments concern its disagreement with the use of AWQC for DDE as potential ARARs. Such use is warranted because these criteria are not inconsistent with CERCLA, the NCP and EPA guidance that is not inconsistent with CERCLA and the NCP.

The Army did not consider the South Platte Organics Standard for DDE to be a potential ARAR because the State standard is not more stringent than the designated potential Federal ARARs and because the Army is unable to determine from presently available information whether the standard was properly promulgated or could effectively result in the statewide prohibition of land disposal (where the standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations).

26. Shell Comments on DDT:

PROPOSED GROUNDWATER ARAR:

For the reasons set forth above, Shell disagrees that the AWQC of 0.0024 $\mu g/l$ should be selected as an ARAR based on 40 CFR § 129.101(a)(3).

Proposed Surface Water ARAR:

Shell tentatively accepts the Army proposal of the AWQC (Aquatic Life) standard (24 hr: 0.0010 $\mu g/l$ and 1.1 $\mu g/l$ at any one time) as a potential ARAR.

Response to Shell Comments on DDT:

In this appendix, the Army has only designated potential ARARs for DDT. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While Shell disagrees with the use of AWQC for DDT as a potential ARAR, such use is warranted because such criteria are not inconsistent with CERCLA, the NCP or EPA guidance that is not inconsistent with CERCLA and the NCP.

Shell's comment expressing its tentative acceptance of the Army's initial determination with respect to surface water requires no further discussion in this context.

27. Shell Comments on 1,2-Dibromo-3-chloropropane:

Biota ARAR:

Shell disagrees with the use standards for food products under the Food and Drug Administration regulations because the standards are neither applicable nor relevant and appropriate to the remediation of RMA.

Response to Shell Comments on 1,2-Dibromo-3-chloropropane:

The use of FDA standards as an aid to determining cleanup levels is warranted because such limitations are not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP. Whether such standards have any practical utility in this context will be determined in the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

28. Shell Comments on p-Dichlorobenzene:

Proposed groundwater ARAR:

Shell disagrees with the use of MCLGs as the basis of potential ARARs for the reasons set forth above.

Shell disagrees with the Army proposal of 400 $\mu g/l$ as an ARAR. The AWQC is not adjusted for consumption of drinking water only, but includes consumption of aquatic organisms as well.

PROPOSED SURFACE WATER ARAR:

Shell disagrees with the use of MCLGs as the basis of potential ARARs for the reasons set forth above.

Shell disagrees with the Army proposal 763 $\mu g/l$ as an ARAR. The Aquatic Life value published at 45 Fed. Reg. 79332 is merely guidance, and does not constitute an AWQC.

Response to Shell Comments on p-Dichlorobenzene:

In this appendix, the Army has only designated potential ARARs for p-Dichlorobenzene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The use of MCLGs or AWQC as potential ARARs is warranted because such criteria are not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

18. Shell Comments on 1,2-Dichloroethane:

PROPOSED GROUNDWATER ARAR:

Shell disagrees with the Army proposal of the MCL of 5 $\mu g/l$ as an ARAR. This MCL is driven by CAG methodology, and therefore, for the reasons set forth above, is unacceptable to Shell.

PROPOSED SURFACE WATER ARAR:

Shell rejects the Army proposal of 0.5 $\mu g/l$ based on 40 CFR 141.61(a) for the reasons set forth above.

Response to Shell Comments on 1,2-Dichloroethane:

In this appendix, the Army has only designated potential ARARs for 1,2-Dichloroethane. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

31. <u>Shell Comments on 1,1-Dichloroethylene:</u>

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of the MCL of 7 μg/l as an ARAR. This MCL is driven by CAG methodology and is therefore, for the reasons set forth above, unacceptable to Shell. Shell disagrees with the use of values based on MCLGs and AWQC as potential ARARs.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposal of 11,600 μg/l as an ARAR. The aquatic life value published at 45 Fed. Reg. 79332 is merely guidance, and does not constitute an AWQC. Shell disagrees with the use of values based on MCLGs as potential surface water ARARs for the reasons set forth above.

<u>Response to Shell Comments on 1,1-Dichloroethylene:</u>

In this appendix, the Army has only designated potential ARARs for 1,1-Dichloroethylene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

The use of the AWQC aquatic life value as a potential ARAR is warranted because such a criterion is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

32. <u>Shell Comments on 1,2-Dichloroethylene:</u>

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 7 μg/l as a potential ARAR based upon the MCL. Shell disagrees with the Army proposal of the AWQC of 0.3 μg/l based upon AWQC. The basis for this rejection is that this value is based upon CAG methodology, and the value is therefore unacceptable for the reasons set forth above.

Proposed Surface Water ARAR:

For the reasons stated above in the discussion of AWQC, Shell disagrees with the Army proposal of 7 $\mu g/l$ based on 52 Fed. Reg. 25716 (1987) as a potential ARAR.

For the reasons stated above in the discussion of CAG, Shell also disagrees with the Army proposal as 17 mg/l and 0.33 $\mu g/l$ at (10^{-6}) risk level as potential ARARs.

Shell disagrees with the Army proposal of 11,600 $\mu g/l$ as an ARAR. The aquatic life value published at 45 Fed. Reg. 79332 is merely guidance, and does not constitute an AWQC.

<u>Response to Shell Comments on 1,2-Dichloroethylene:</u>

In this appendix, the Army has only designated potential ARARs for 1,2-Dichloroethylene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

As discussed above, Shell's concerns with the CAG methodology do not properly arise in this context.

The use of AWQC as potential ARARs is warranted because such criteria are not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

34. <u>Shell Comments on Dieldrin:</u>

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 0.12 $\mu g/l$ based on 40 CFR § 129.100(a)(3) as an ARAR for reasons set forth above in the comments on aldrin. Shell also disagrees with the Army proposal of the AWQC of 0.17 ng/l at (10^{-6}) risk level as a potential ARAR for reasons set forth above in the discussion of CAG.

Proposed Surface Water ARAR:

Shell tentatively accepts the Army proposals of 0.0019 $\mu g/l$ for a 24-hour average and 2.5 $\mu g/l$ at any one time based on AWQC (Aquatic Life) standard as a potential ARAR.

Shell disagrees with the Army proposal of 0.71 $\mu g/l$ at 10^{-6} risk level based on AWQC for the consumption of drinking water and aquatic life for the reasons set forth above. See discussion of EPA CAG methodology.

Response to Shell Comments on Dieldrin:

In this appendix, the Army has only designated potential ARARs for Dieldrin. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army disagrees with Shell's comments on the use of 40 C.F.R. § 129.100(a)(3) as a potential ARAR for the same reasons set forth above in the response to Shell's comments on aldrin.

As discussed above, Shell's concerns about the CAG methodology do not properly arise in this context.

Shell's comment expressing its tentative acceptance of the Army's initial determination with respect to surface water requires no further discussion in this context.

37. Shell Comments on Endrin:

PROPOSED GROUNDWATER ARAR:

Shell agrees with the Army proposal of 0.2 $\mu g/l$ as an ARAR based on 40 CFR § 141.12.

Shell disagrees with the Army proposal of 0.2 $\mu g/l$ as an ARAR based on 40 CFR § 264.94(a)(2) for the reasons set forth in the discussion of RCRA permit conditions.

Shell disagrees with the Army proposal of 1 $\mu g/l$ based on AWQC for reasons set forth above for the reasons set forth in the discussion of AWQC.

PROPOSED SURFACE WATER ARAR:

Shell tentatively accepts the Army proposal of the AWQC (Aquatic Life) standard (24 hr: .0023 $\mu g/l$; max: .037 $\mu g/l$) as a potential ARAR. Shell agrees with the Army in not including the State surface water standard for endrin (.004 $\mu g/l$) as a potential ARAR because it is not more stringent than the AWQC. See discussion of Ambient Water Quality Criteria.

BIOTA ARAR:

Shell rejects the Army proposal of zero tolerance for residues of endrin in agricultural products for the reasons set forth in the discussion of EPA and FDA action level tolerances.

Response to Shell Comments on Endrin:

In this appendix, the Army has only designated potential ARARs for Endrin. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

Shell's disagreements with the use of RCRA regulations and AWQC as potential ARARs are addressed respectively in the responses to Shell's general comments on RCRA permit conditions and AWQC.

Shell's comments expressing its tentative acceptance of the Army's initial determination of C.F.R. § 141.12 and the aquatic life standard as potential ARARs require no further discussion in this context.

38. Shell Comments on Ethylbenzene:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 1,400 $\mu g/l$ as an ARAR. This value has been derived from non-referenced sources for the protection of human health. The references do not advise the reader on the toxicological endpoints considered or the assumptions incorporated in performing the calculations for values protective of human health. Furthermore, considerations which are protective of biota in surface.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposals of 1,400 $\mu g/l$ 32,000 $\mu g/l$ based on AWQC as an ARAR for reasons set forth above.

Response to Shell Comments on Ethylbenzene:

In this appendix, the Army has only designated potential ARARs for Ethylbenzene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG

methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

39. Shell Comments on Fluoride:

PROPOSED GROUNDWATER ARAR:

Shell tentatively agrees with the Army proposal of the MCL of 4,000 μg/l as an ARAR.

Shell rejects the Army proposal of 4,000 μg/l based on 40 CFR 141.50(b) as a potential ARAR for the reasons set forth above in the discussion of MCLGS.

PROPOSED SURFACE WATER ARAR:

Shell rejects the Army proposal of 4,000 μg/l based on 40 CFR § 141.50(b) as a potential ARAR for the reasons set forth above in the discussion of AWQC.

Response to Shell Comments on Fluoride:

In this appendix, the Army has only designated potential ARARs for Fluoride. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's comments expressing its tentative agreement with the Army's initial determination for Fluoride requires no further discussion in this context.

41. Shell Comments on Lead:

AIR ARAR:

Shell questions why the Army did not consider the State regulations for the control of Hazardous Air Pollutants regarding lead as a potential ARAR. See 5 Colo. Code Reg. 1001-10 p. 52.

PROPOSED GROUNDWATER ARAR:

Shell tentatively supports the MCL of 50 μg/l as a potential ARAR for the reasons outlined in the arsenic comment.

Shell disagrees with the Army proposal of 50 μg/l as an ARAR based upon 40 CFR § 264.94(a)(2) as an ARAR for the reasons set forth above in the RCRA discussion. Shell also disagrees with the Army proposal of the AWQC of 50 μg/l as an

ARAR. The Aquatic Life Value published at 45 Fed. Reg. 79336 is merely guidance, and does not constitute an AWQC. Furthermore, this guidance is more stringent than the MCL.

Proposed Surface Water ARAR:

Shell tentatively accepts the Army proposal of the AWQC (Aquatic Life) standard (24 hr: e(2.35 [In (hardness)] -9.48]; max: e(1.22 [In hardness)] -0.47) as an ARAR.

Shell disagrees with the Army proposal of 50 $\mu g/l$ based on 40 CFR 264.94(a)(2) as an ARAR for the reasons set forth above in the RCRA discussion.

Response to Shell Comments on Lead:

In this appendix, the Army has only designated potential ARARs for Lead. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army did not consider the lead standard in the CDH regulations for the Control of Hazardous Air Pollutants because this standard is not more stringent than the potential Federal ARARs.

The Army disagrees with Shell's position on the designation of RCRA requirements as potential ARARs for the reasons set forth above in response to Shell's general comment on RCRA permit conditions.

The use of the AWQC as potential ARARs is warranted because such criteria are not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

Shell's comments expressing its tentative acceptance of the Army's initial groundwater and surface water determinations requires no further discussion in this context.

Shell Comments on (44) Mercuric chloride and (45) Mercury:

Air ARAR:

Shell disagrees with the Army proposal of emissions values based on 40 CFR 61.52 and (b) as ARARs for the reasons set forth above in the discussion of NESHAPs.

PROPOSED GROUNDWATER ARAR:

Shell agrees with the Army proposal of the MCL of 2 $\mu g/l$ as an ARAR for the reasons outlined in the arsenic comments.

Shell disagrees with the Army proposal of 144 ng/l based on 45 Fed. Reg. 79336-79337 as an ARAR for the reasons set forth in the discussion of AWQC.

PROPOSED SURFACE WATER ARAR:

Shell tentatively accepts the Army proposal of the AWQC (Aquatic Life) standard (24 hr: .00057 $\mu g/l$; max .0017 $\mu g/l$) as an ARAR.

Shell disagrees with the Army proposal of 144 ng/l based on 45 Fed. Reg. 79336-79337 as an ARAR for the reasons set forth above in the AWQC discussion.

Shell disagrees with the Army proposal of 2 $\mu g/l$ based on 40 CFR § 264.94(a)(2) as an ARAR for the reasons set forth above in the RCRA discussion.

Response to Shell Comments on (44) Mercuric chloride and (45) Mercury:

In this appendix, the Army has only designated potential ARARs for Mercuric chloride and Mercury. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army declines to adopt Shell's opposition to the use of emissions values as potential ARARs for the reasons set forth above in response to Shell's general comments on NESHAPs.

The Army declines to adopt Shell's opposition to the use of 144 ng/l (45 Fed. Reg. 79336-79337) as a potential ARAR for the reasons set forth above in response to Shell's general comments on AWQC.

The Army declines to adopt Shell's opposition to the use of 2 $\mu g/l$ (40 C.F.R. § 264.94(a)(2)) as a potential ARAR for the reasons set forth above in response to Shell's general comments on RCRA permit conditions.

The balance of Shell's comments concern its agreement or tentative acceptance of the Army's designation of potential ARARs and thus requires no further discussion in this context.

46. Shell Comments on Nitrate:

PROPOSED GROUNDWATER ARAR:

Shell tentatively agrees that the MCL (10,000 $\mu g/l$) for this chemical based on 40 C.F.R. § 141.11(b) should be treated as an ARAR.

SURFACE WATER ARAR:

Shell agrees with the Army in not selecting the State surface water standard for nitrates (10,000 ng/1) as a potential ARAR because it is the same as the corresponding Federal AWQC (1976) and therefore is not more stringent. See discussion of Ambient Water Quality Criteria.

Response to Shell Comments on Nitrate:

In this appendix, the Army has only designated potential ARARs for Nitrate. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's comments expressing tentative agreement and agreement with the Army's initial groundwater and surface water determinations requires no further discussion in this context.

61. Shell Comments on p, p-TDE:

PROPOSED SURFACE WATER ARAR:

Shell disagrees with the Army proposal of 0.6 $\mu g/l$, based on 45 Fed. Reg. 79331, as an ARAR for the reasons set forth above in the discussion of AWQC.

Response to Shell Comments on p, p-TDE:

In this appendix, the Army has only designated potential ARARs for p, p-TDE. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army declines to adopt Shell's opposition to the use of 0.6 $\mu g/l$ (45 Fed. Reg. 79331) as a potential ARAR for the reasons set forth above in response to Shell's general comments on AWQC.

62. Shell Comments on Tetrachlorobenzene:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 38 $\mu g/l$ based on 45 Fed. Reg. 79327 as an ARAR for the reasons set forth above in the discussion of AWQC.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposals of 38 $\mu g/1$ and 250 $\mu g/l$ based on 45 Fed. Reg. 79327 as ARARs for the reasons set forth above.

Response to Shell Comments on Tetrachlorobenzene:

In this appendix, the Army has only designated potential ARARs for Tetrachlorobenzene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army declines to adopt Shell's opposition to the use of 38 $\mu g/l$ or 250$\mu g/l$ (45 Fed. Reg. 79327) as potential ARARs for the reasons set forth in response to Shell's general comments on AWQC.

64. 1,1,2,2-Tetrachloroethylene:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 8 $\mu g/1$ (10^{-5}) based on 45 Fed. Reg. 79341 as an ARAR for the reasons set forth above.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposals of 8 $\mu g/1$ (10^{-5}) based on 45 Fed. Reg. 79341 as an ARAR for the reasons set forth above.

Response to Shell Comments on 1,1,2,2-Tetrachloroethylene:

In this appendix, the Army has only designated potential ARARs for 1,1,2,2-Tetrachloroethylene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army declines to adopt Shell's opposition to the use of 8 $\mu g/l$ (45 Fed. Reg. 79341) as potential ARARs for the reasons set forth above in response to Shell's general comments on AWQC.

65. Shell Comments on Toluene:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 14,300 µg/l based on 45 Fed. Reg. 79340 (1980) as an ARAR for the reasons set forth above in the discussion of AWQCs.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposals of 14,300 µg/l and 17,500 µg/l as ARARs based on 45 Fed. Reg. 79340 (1980) for the reasons set forth above in the discussion of AWQC.

Response to Shell Comments on Toluene:

In this appendix, the Army has only designated potential ARARs for Toluene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army declines to adopt Shell's opposition to the use of 14,300 and 17,500 µg/l (45 Fed. Reg. 79340) as potential ARARs for the reasons set forth above in response to Shell's general comments on AWQC.

66. Shell Comments on 1,1,1-Trichloroethane:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 200 µg/l based on 40 CFR § 141.50 as an ARAR for the reasons set forth above in the discussion of MCLGs.

Proposed Surface Water ARAR:

Shell disagrees that the MCL for this chemical should be selected as an ARAR because it is driven by CAG methodology.

Response to Shell Comments on 1,1,1-Trichloroethane:

In this appendix, the Army has only designated potential ARARs for 1,1,1-Trichloroethane. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army declines to adopt Shell's opposition to 200 µg/l (40 C.F.R. § 141.50) as a potential ARAR for the reasons set forth above in response to Shell's general comments on MCLGs.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

67. Shell Comments on Trichloroethylene:

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of 5 $\mu g/l$ based on 40 CFR § 141.61(a) as an ARAR for the reasons set forth above in the discussions of CAG methodology and proposed standards.

Shell disagrees with the Army proposal of 27 $\mu g/l$ (10^{-5}) based on 45 Fed. Reg. 79341 as an ARAR for the reasons set forth above in the discussion of CAG.

Proposed Surface Water ARAR:

Shell disagrees with the Army proposals or 45,000 $\mu g/l$ and 27 $\mu g/l$ (10^{-5}) based on 45 Fed. Reg. 79341 as ARARs for the reasons set forth above in the discussion of CAG.

Response to Shell Comments on Trichloroethylene:

In this appendix, the Army has only designated potential ARARs for Trichloroethylene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

While the Army understands Shell's CAG-related concerns, as explained in the Army's response to Shell's general comments, reassessment of the merits of the CAG methodology is a national EPA issue that must be resolved by EPA in the first instance. If EPA determines to modify the CAG methodology during the course of the Off-Post RMA RI/FS, such modification(s) will be applied in each pertinent instance to the substances identified herein.

68. Shell Comments on Xylene

Proposed Groundwater ARAR:

Shell disagrees with the Army proposal of a narrative standard based 40 CFR § 180.1025(c) as a potential ARAR for the reasons set forth above in the discussion of TPCRAC.

Proposed Surface Water ARAR:

Shell disagrees with Army proposal of a narrative standard based on 40 CFR § 180.1025(c) as a potential ARAR for the reasons set forth above in the discussion of TPCRAC.

Response to Shell Comments on Xylene:

In this appendix, the Army has only designated potential ARARs for Xylene. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

The Army declines to adopt Shell's position because the designation of 40 C.F.R. § 180.1025(c) as a potential ARAR is not inconsistent with CERCLA, the NCP and EPA guidance not inconsistent with CERCLA and the NCP.

Shell Comments on (69) Zinc and (70) Zinc Oxide:

Proposed Surface water ARAR:

Shell tentatively agrees with the Army proposal of the AWQC (Aquatic Life) standard (24 hr: 47 μg/l; max: e(0.83 [In hardness)] -1.90) as a potential ARAR.

Response to Shell Comments on (69) Zinc and (70) Zinc Oxide:

In this appendix, the Army has only designated potential ARARs for Zinc and Zinc Oxide. Whether these potential ARARs merit selection as ARARs will be determined in the context of the Feasibility Study/Endangerment Assessment Report for the Off-Post Operable Unit.

Shell's comments expressing tentative agreement with the Army's initial determination of potential ARARs for Zinc and Zinc Oxide in surface water requires no further discussion in this context.

C. Shell Miscellaneous Comments on Appendix H

Shell Miscellaneous Comment No. 1:

Appendix H, page iii, second paragraph - Change "criterium" in the fourth line to "criterion."

Response to Shell's Miscellaneous Comment No. 1:

The requested change has been made.

Shell Miscellaneous Comment No. 2:

Appendix H, page iv, second paragraph - Is the reference to "this volume" in the second sentence an error?

Response to Shell's Miscellaneous Comment No. 2:

The reference has been changed to "this appendix" for greater clarity.

Shell Miscellaneous Comment No. 3:

Appendix H, page iv, fourth paragraph - The last line should be corrected to refer to Section 121(d) of CERCLA, 42 U.S.C. § 9621(d), since the selection process may include waiver under Section 121(d)(4). See, for example, the last sentence in paragraph 16.59 of the RI/FS Process Document.

Response to Shell's Miscellaneous Comment No. 3:

The requested change has been made for greater clarity.

Shell Miscellaneous Comment No. 4:

Appendix H, page viii - the first word should be "levels," not "limits."

Response to Shell's Miscellaneous Comment No. 4:

The requested change has been made.

Shell Miscellaneous Comment No. 5:

Appendix H, page iii, second paragraph - Change "CDH" in the fifth line to "the State," since it is the State that is to identify State ARARs under Section 121(d)(2)(A)(ii) of CERCLA.

Response to Shell's Miscellaneous Comment No. 5:

The requested change has been made.

Shell Miscellaneous Comment No. 6:

Appendix H, page ix. second paragraph - Change "work" in the first line to "worker."

Response to Shell's Miscellaneous Comment No. 6:

The requested change has been made.

Shell Miscellaneous Comment No. 7:

Shell supports the Army's decision to address worker protection standards separately from the ARAR selection process. As we have commented in the past, Shell supports the application of worker protection standards, but believes that those standards should not be confused with ARARs.

Response to Shell's Miscellaneous Comment No. 7:

Shell's agreement with the Army on this matter requires no further discussion in this context.

COLORADO ARAR COMMENTS

Colorado Comment No. 26:

Appendix H, page vi. The text should include 5 CCR 1001-2 through 5 CCR 1001-10 as potential air ARARs.

Response to Colorado Comment No. 26:

The Army is unable to determine from presently available information whether any of these standards were properly promulgated and generally applicable and thus none of the referenced regulations have been identified at this time as potential State ARARs. In order for the Army to determine whether the referenced standards qualify as potential ARARs, the State is requested to provide to counsel for the Army:

(a) Specific citations to the generally referenced State air standards;

(b) Proof of promulgation of the referenced State air standards (including opportunity for notice and comment by the public) with a brief description of the promulgation process followed by the State;

(c) Copies of pertinent rulemakings or preambles to the regulations;

(d) Copies of all relevant Colorado Attorney General Opinions interpreting these regulations and any relevant Colorado Department of Health guidance documents;

(e) Copies of any relevant judicial or administrative determinations;

(f) A description of all relevant circumstances for each instance where the State has similarly construed or applied these air regulations for sites in Colorado; and

(g) Any other documents that the State believes support its position that the referenced State air regulations qualify as State ARARs for the CERCLA cleanup of the Off-Post RMA Operable Unit because these regulations constitute promulgated, generally applicable State standards, requirements, criteria or limitations under a State environmental or facility siting law that is more stringent than any federal standards, requirements, criteria or limitations.

Colorado Comment No. 27:

Appendix II, page vi. The text should include the following potential groundwater ARARs:

- Colorado Basic Standards for Groundwater, 5 CCR 1002-8, Section 3.11.0 et seq. (in particular Tables 1, 2, and 3).

- Colorado Basic Standards and Methodologies, 5 CCR 1002-8, Section 3.1.0 et seq. (in particular Section 3.1.11).

Response to Colorado Comment No. 27:

The Army is unable to determine from presently available information whether any of these standards were properly promulgated or could effectively result in the statewide prohibition of land disposal of hazardous substances, pollutants or contaminants (where the State standards are not of general applicability or adopted by formal means, or where the State standards were not adopted on the basis of hydrologic, geologic or other relevant considerations). In order for the Army to determine whether the referenced standards qualify as potential State ARARs, the State is requested to provide to counsel for the Army:

(a) Specific citations to the generally referenced groundwater standards;

(b) Proof of promulgation of the referenced State groundwater standards (including opportunity for notice and comment by the public) with a brief description of the promulgation process followed by the State;

(c) Copies of pertinent rulemakings or preambles to the regulations;

(d) Copies of all relevant Colorado Attorney General Opinions interpreting these regulations and any relevant Colorado Department of Health guidance documents;

(e) Copies of any relevant judicial or administrative determinations;

(f) A description of all relevant circumstances for each instance where the State has similarly construed or applied these groundwater regulations for sites in Colorado; and

(g) Any other documents that the State believes support its position that the referenced State groundwater regulations qualify as State ARARs for the CERCLA cleanup of the Off-Post RMA Operable Unit because the regulations constitute promulgated, generally applicable State standards, requirements, criteria or limitations under a State environmental or facility siting law that is more stringent than any federal standards, requirements, criteria or limitations.

Colorado Comment No. 28:

Appendix H, page viii. Contrary to the statement in the text, the State has identified promulgated chemical-specific ARARs for RMA on several occasions. In particular, the State identified ARARs on January 6, 1987, March 7, 1987, and most recently on July 18, 1988. The Army has consistently ignored all promulgated State statutes and regulations. This practice is inconsistent with U.S. EPA actions at Colorado CERCLA sites and is not consistent with Section 121(d) of CERCLA. To the extent the State promulgated standards are more stringent than the federal standards, the State standards must be met. Attachment 1 contains State identified chemical-specific standards (ARARs).

Response to Colorado Comment No. 28:

Although the State has identified on each of the referenced occasions standards that it characterizes as State ARARs, the State has failed, to date, to meet its burden under 42 U.S.C. § 9621(d)(2)(A)(ii) and (C) to show that these standards warrant treatment as potential State ARARs. The Army is unable to determine from presently available information whether these standards were properly promulgated or could effectively result in the statewide prohibition of land disposal (where the standard is not of general applicability or adopted on the basis of hydrologic, geologic or other relevant considerations).

Until such time as the State provides to counsel for the Army sufficient information to establish that the State standards merit consideration as potential ARARs, the Army will not treat them as such.

COLORADO ATTACHMENT 1

STATE IDENTIFICATION OF ADDITIONAL CHEMICAL-SPECIFIC ARARs FOR OFF-POST OPERABLE UNIT AT RMA

REFERENCE

(1) Colorado Basic Standards for Groundwater, 5 CCR 1002-8, Section 3.11.0--3.11.9 (in particular Tables 1, 2, and 3).

(2) Colorado Basic Standards and Methodologies, 5 CCR 1002-8, Section 3.1.0--3.1.20 (in particular Section 3.1.11).

(3) Federal Safe Drinking Water Act (in particular Maximum Contaminant Level Goals--MCLGs).

(4) Federal Safe Drinking Water Act (in particular Maximum contaminant Levels--MCLs).

(5) Federal Clean Water Act (in particular Water Quality Criteria for Protection of Human Health).

Chemical	Abbreviation	Water Quality Standard (Reference) all values in µg/l
Aldrin	ALDRN	0(2) 0.000074(5)
Arsenic	AS	50(1) 50(4)
Benzene	C6H6	0(3) 5(4)
Carbon tetrachloride	CCL4	0(3) 5(4)
Chloride	CL	250,000(1)
Chlorobenzene	CLC6H5	0(2)
Chloroform	CHCL3	.19(5)
Chlorophenylmethyl sulfide	CPMS	0(2)
Chlorophenylmethyl sulfone	CPMSO2	0(2)
Chlorophenylmethyl sulfoxide	CPMSO	0(2)

Chemical	Abbreviation	Water Quality Standard (Reference) all values in $\mu g/l$
Chromium	CR	50(1) 1.2(3)* 50(4)
Copper	CU	200(1) 1300(3)*
Dibromochloropropane	DBCP	0(2) 0(3)
Dichlorobenzenes	CL2BZ	75(3) 74(4)
Dichlorodiphenylethane	PPDDE	0(2)
Dichlorodiphenyltrichloroethane	PPDDT	0(2)
1,1-Dichloroethane	11DCLE	0(2)
1,2-Dichloroethane	12DCLE	0(3) 5(4)
1,2-Dichloroethylene	12DCE	0(2)
2,4-Dichlorophenoxyacetic acid	24D	7(3) 100(4)
Dicyclopentadiene	DCPD	0(2)
Dieldrin	DLDRN	0(2) 0.000071(5)
Diisopropylmethyl phosphonate	DIMP	0(2)
Dimethylmethylphosphate	DMMP	0(2)
Dithiane	DITH	0(2)
Endrin	ENDRN	0.2(1) 0.2(4)
Ethylbenzene	ETC6H5	0(2) 680(3)*
Fluoride	F	4000(1) 4000(4)
Iron	FE	300(1)
Isodrin	ISODR	0(2)
Lead	PB	50(1) 20(3)* 50(4)
Mercury	HG	2(1) 2(4)
Methylene chloride	CH2CL2	0(2)
Nitrite	NIT	1000(1)
Nitrate		10,000(1) 10,000(4)
Oxathiane	OXAT	0(2)
pH	PH	6.5--8.5(1)
Sulfate	SO4	250,000(1)

Chemical	Abbreviation	Water Quality Standard (Reference) all values in $\mu g/l$
Tetrachloroethylene	TCLEE	0(2) 0(3)*
Toluene	MEC6H5	0(2) 2000(3)*
Trichloroethylene	TRCLE	0(3) 5(4)
All Unknowns	UNK---	0(2)
All Other Organic Compounds		0(2)
Xylenes	XYLEN	0(2)
Zinc	ZN	500(1)

* Proposed Maximum Contaminant Level Goals

Response to Colorado Attachment I:

The State should be aware that the information provided in Colorado Attachment I is not helpful in aiding the Army to determine the existence of any potential State ARARs.

The Army is unable to determine from presently available information whether any of these State standards were properly promulgated or could effectively result in the statewide prohibition of land disposal of hazardous substances, pollutants or contaminants (where the State standards are not of general applicaibility or adopted by formal means, or where the State standards were not adopted on the basis of hydrologic, geologic or other relevant considerations). In order for the Army to determine whether the referenced standards qualify as potential State ARARs, the State is requested to provide to counsel for the Army:

(a) Specific citations to the generally referenced groundwater standards;

(b) Proof of promulgation of the referenced State groundwater standards (including opportunity for notice and comment by the public) with a brief description of the promulgation process followed by the State;

(c) Copies of pertinent rulemakings or preambles to the regulations;

(d) Copies of all relevant Colorado Attorney General Opinions interpreting these regulations and any relevant Colorado Department of Health guidance documents;

(e) Copies of any relevant judicial or administrative determinations;

(f) A description of all relevant circumstances for each instance where the State has similarly construed or applied these groundwater regulations for sites in Colorado; and

(g) Any other documents that the State believes support its position that the referenced State groundwater regulations qualify as State ARARs for the CERCLA cleanup of the Off-Post RMA Operable Unit because the regulations constitute promulgated, generally applicable State standards, requirements, criteria or limitations under a State environmental or facility siting law that is more stringent than any federal standards, requirements, criteria or limitations.

APPENDIX I
ANALYTICAL RESULTS OF OFFPOST CONTAMINATION ASSESSMENT
REPORTS, DISTRIBUTION MAPS

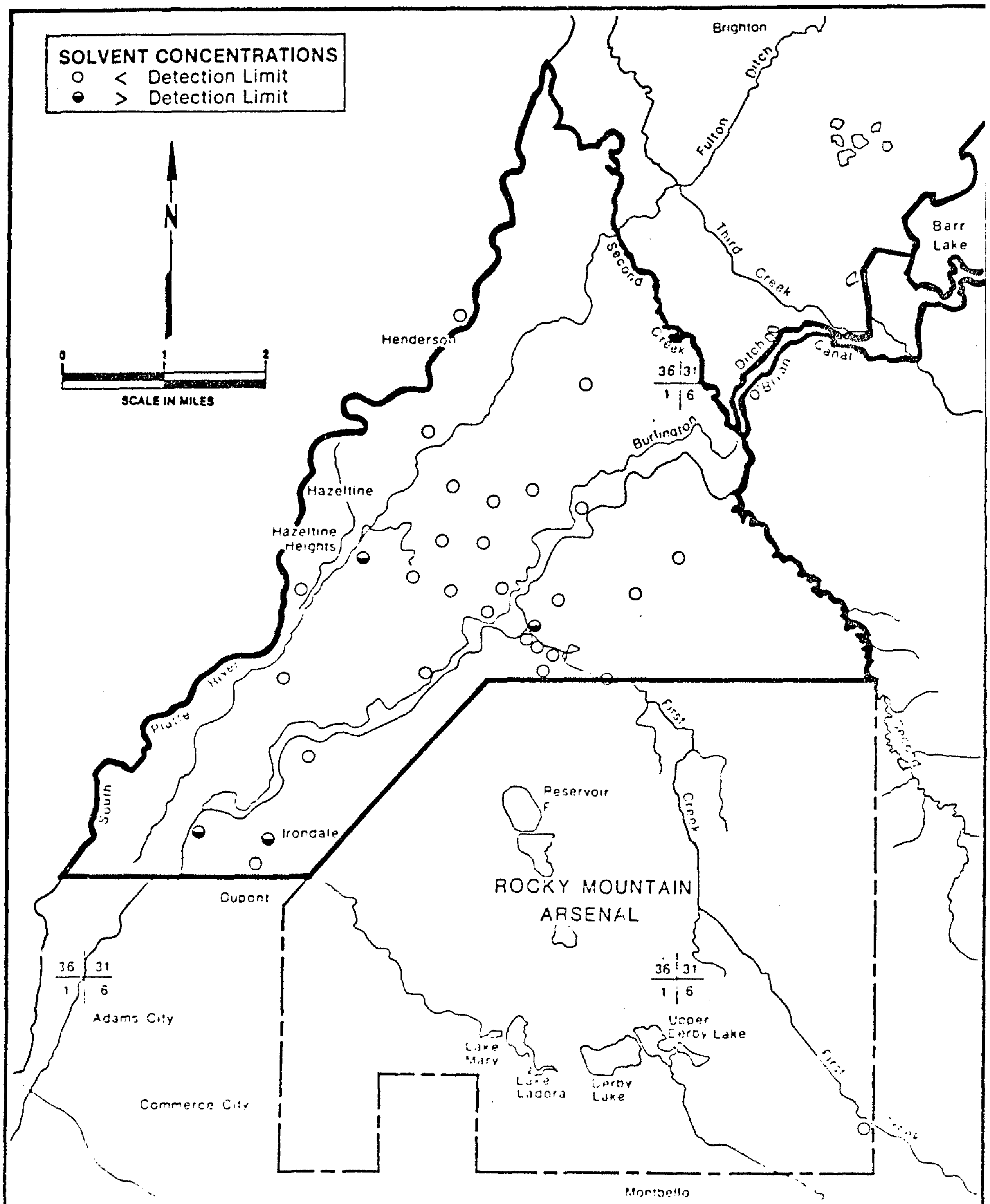


Figure I-1
AROMATIC AND HALOGENATED ALIPHATIC SOLVENT ASSESSMENT RMA OFFPOST FIRST QUARTER SAMPLING OF WELLS
SOURCE: ESE, 1987

Prepared for:
U.S. Army Program Manager's Office For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

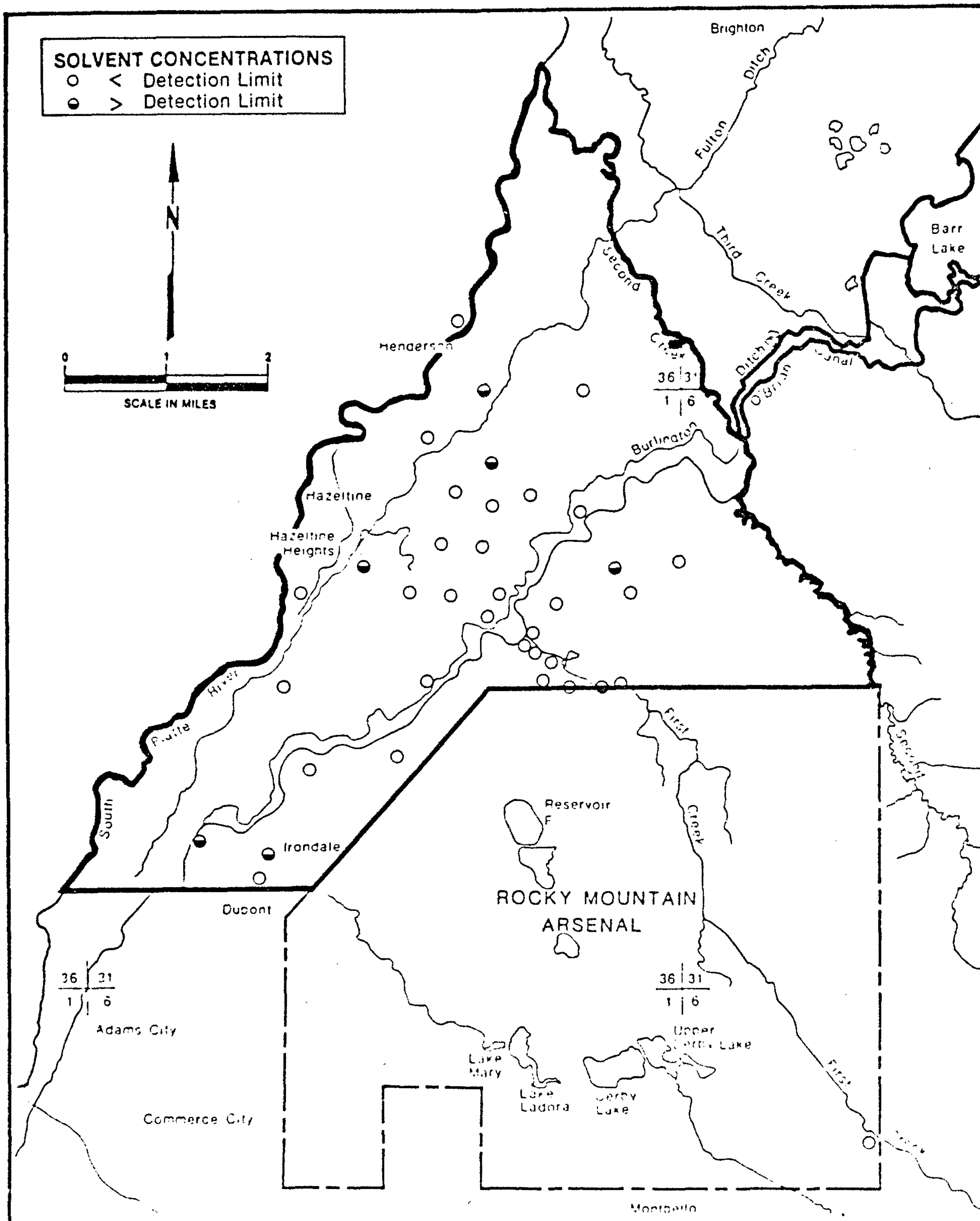


Figure I-2
AROMATIC AND HALOGENATED ALIPHATIC SOLVENT ASSESSMENT RMA OFFPOST SECOND QUARTER SAMPLING OF WELLS
SOURCE: ESE, 1987

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

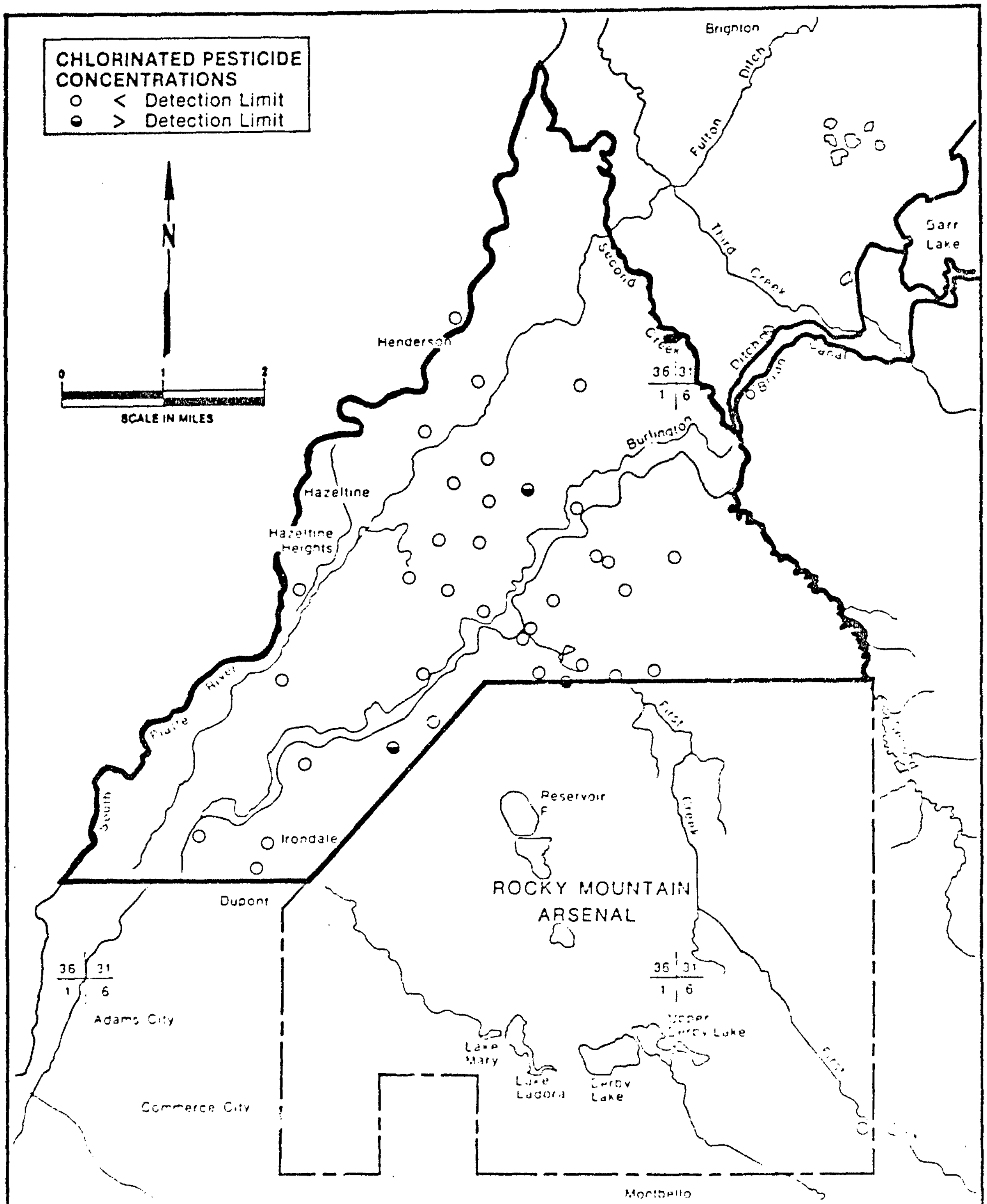


Figure I-3
CHLORINATED PESTICIDE ASSESSMENT
RMA OFFPOST FIRST QUARTER SAMPLING
OF WELLS

SOURCE: ESE, 1987

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

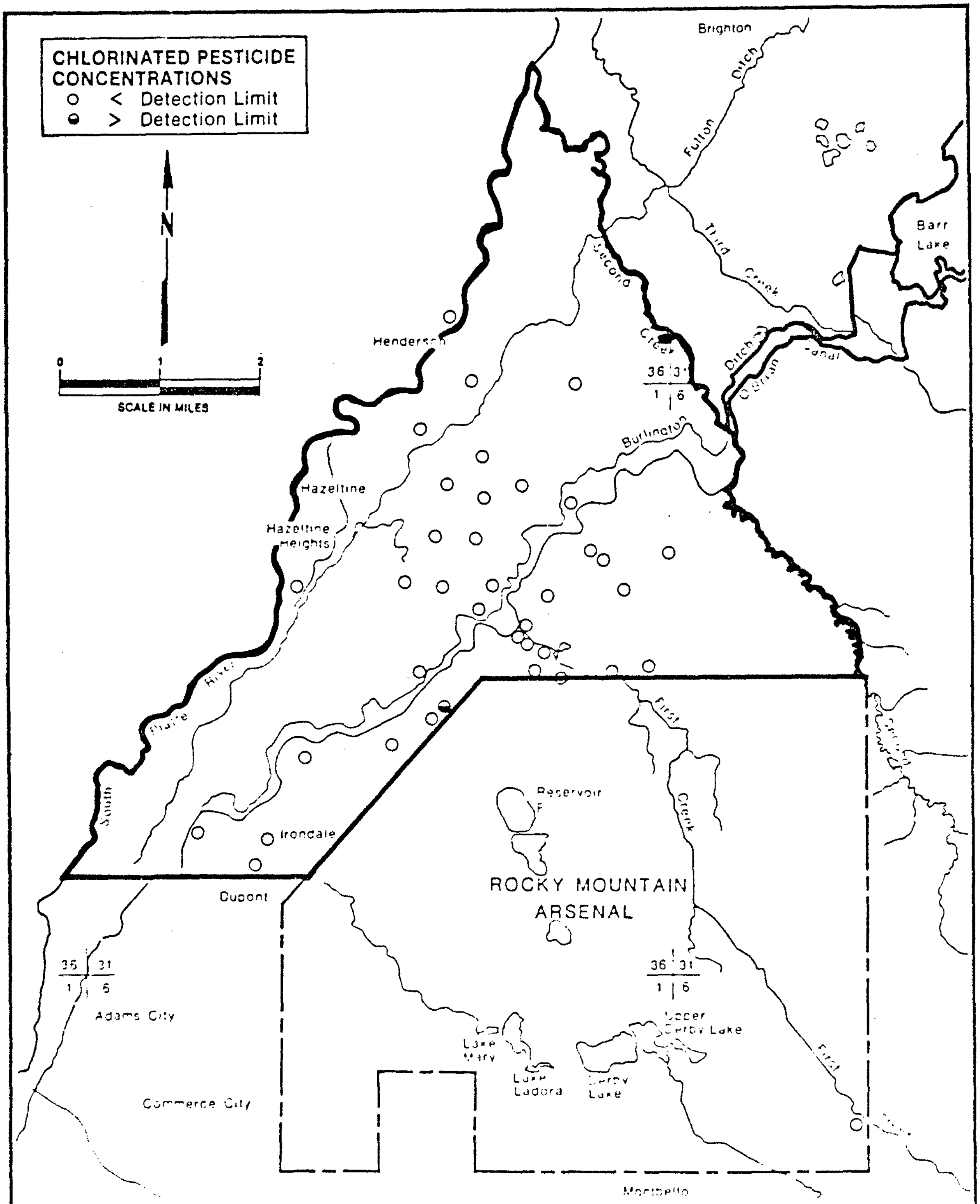


Figure I-4
CHLORINATED PESTICIDE ASSESSMENT
RMA OFFPOST SECOND QUARTER
SAMPLING OF WELLS
SOURCE: ESE, 1987

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

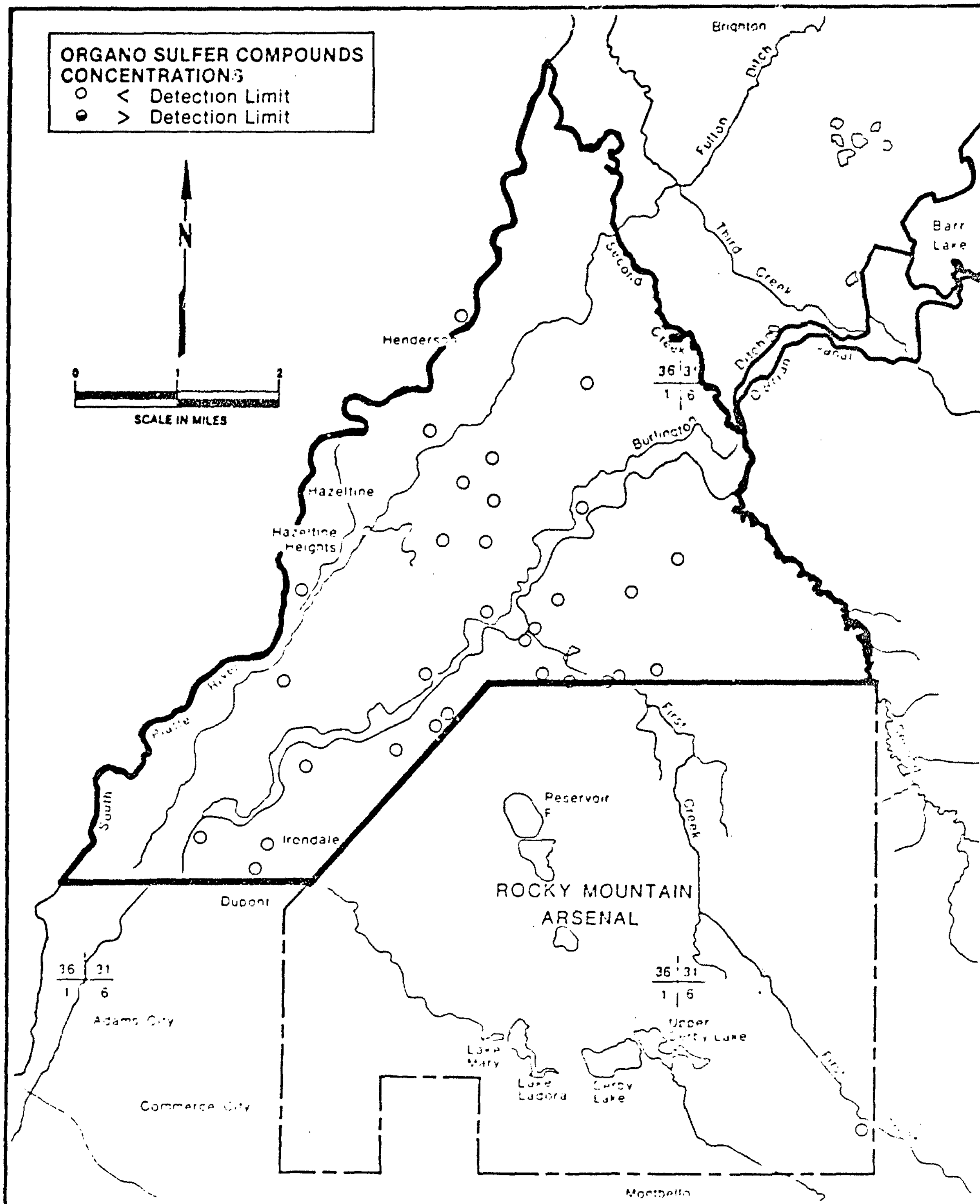


Figure I-5
ORGANOSULFUR COMPOUNDS ASSESSMENT RMA
OFFPOST FIRST QUARTER SAMPLING OF WELLS
SOURCE: ESE, 1987

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

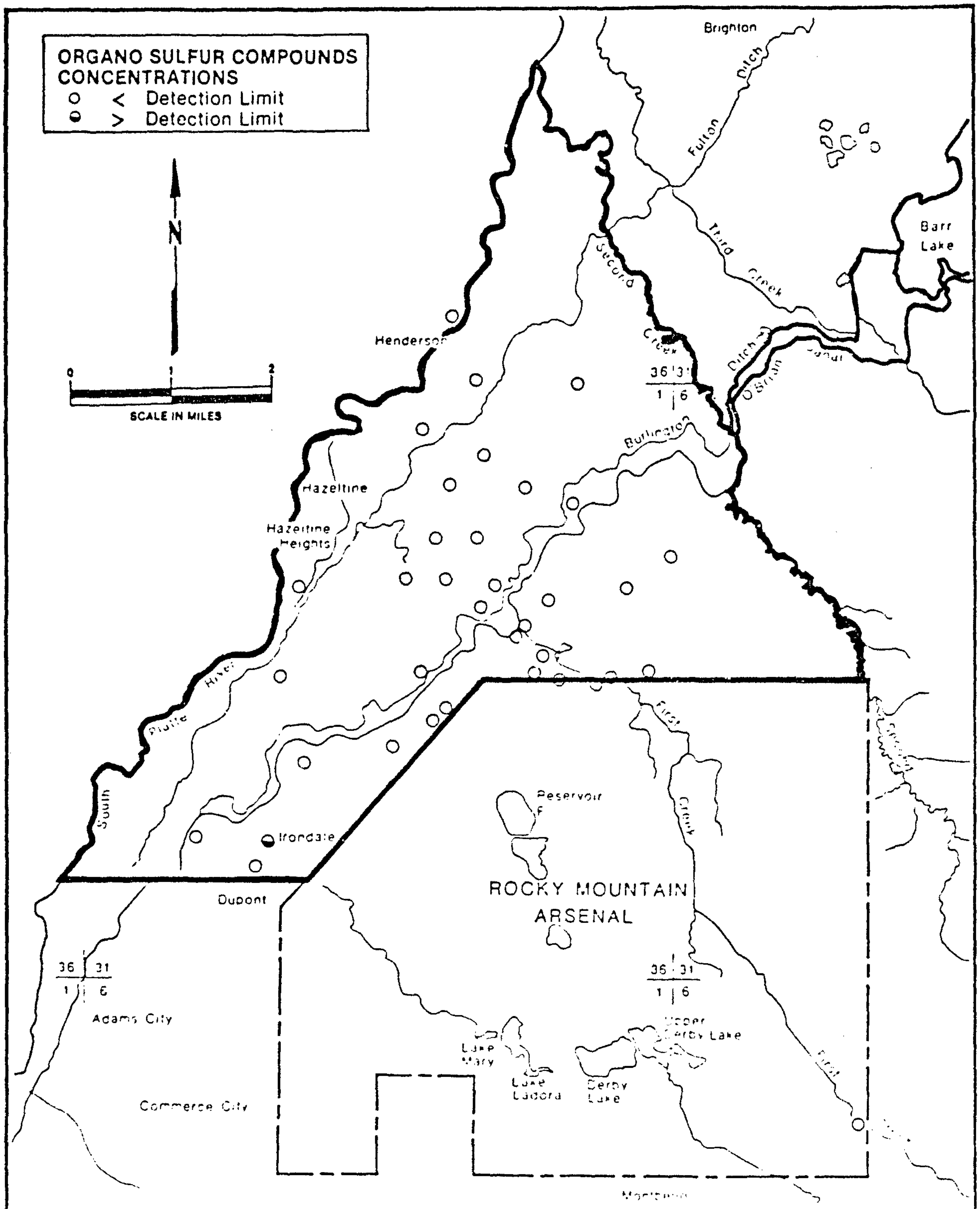


Figure I-6
ORGANOSULFUR COMPOUNDS ASSESSMENT RMA
OFFPOST SECOND QUARTER SAMPLING OF WELLS
SOURCE: ESE, 1987

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

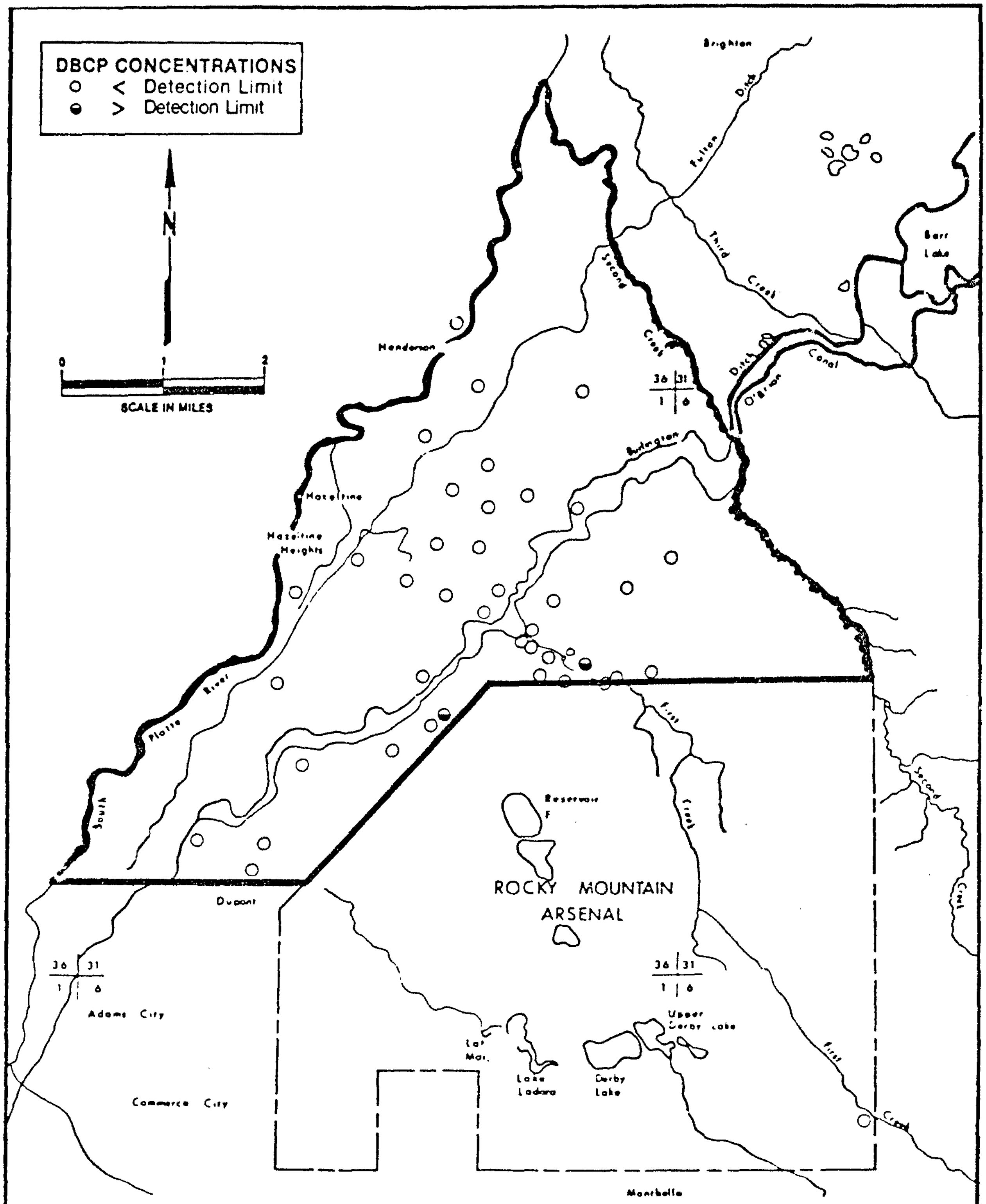


Figure I-7
DBCP ASSESSMENT RMA OFFPOST FIRST QUARTER SAMPLING OF WELLS
SOURCE: ESE, 1987

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

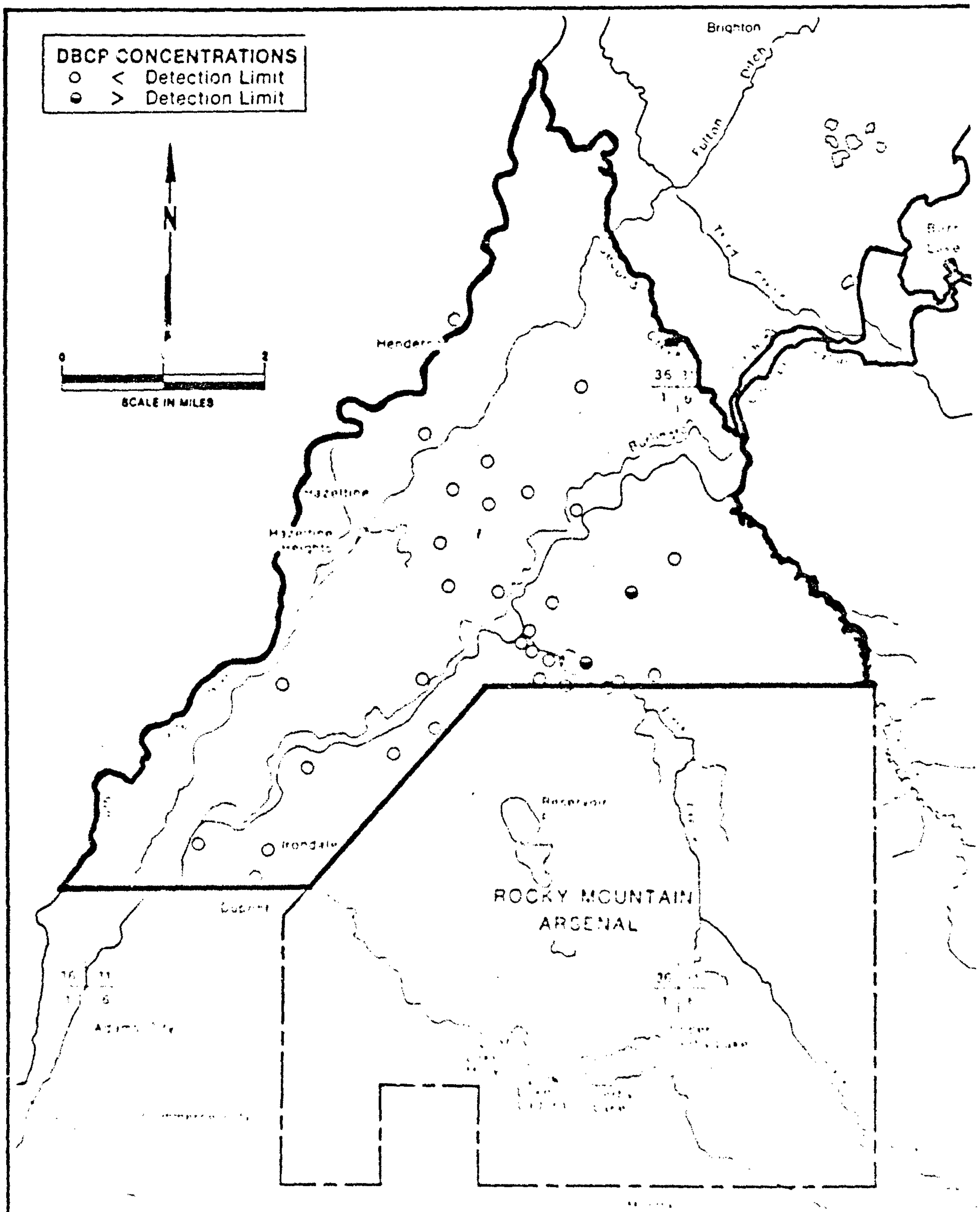


Figure I-8
DBCP ASSESSMENT RMA OFFPOST
SECOND QUARTER SAMPLING OF WELLS

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

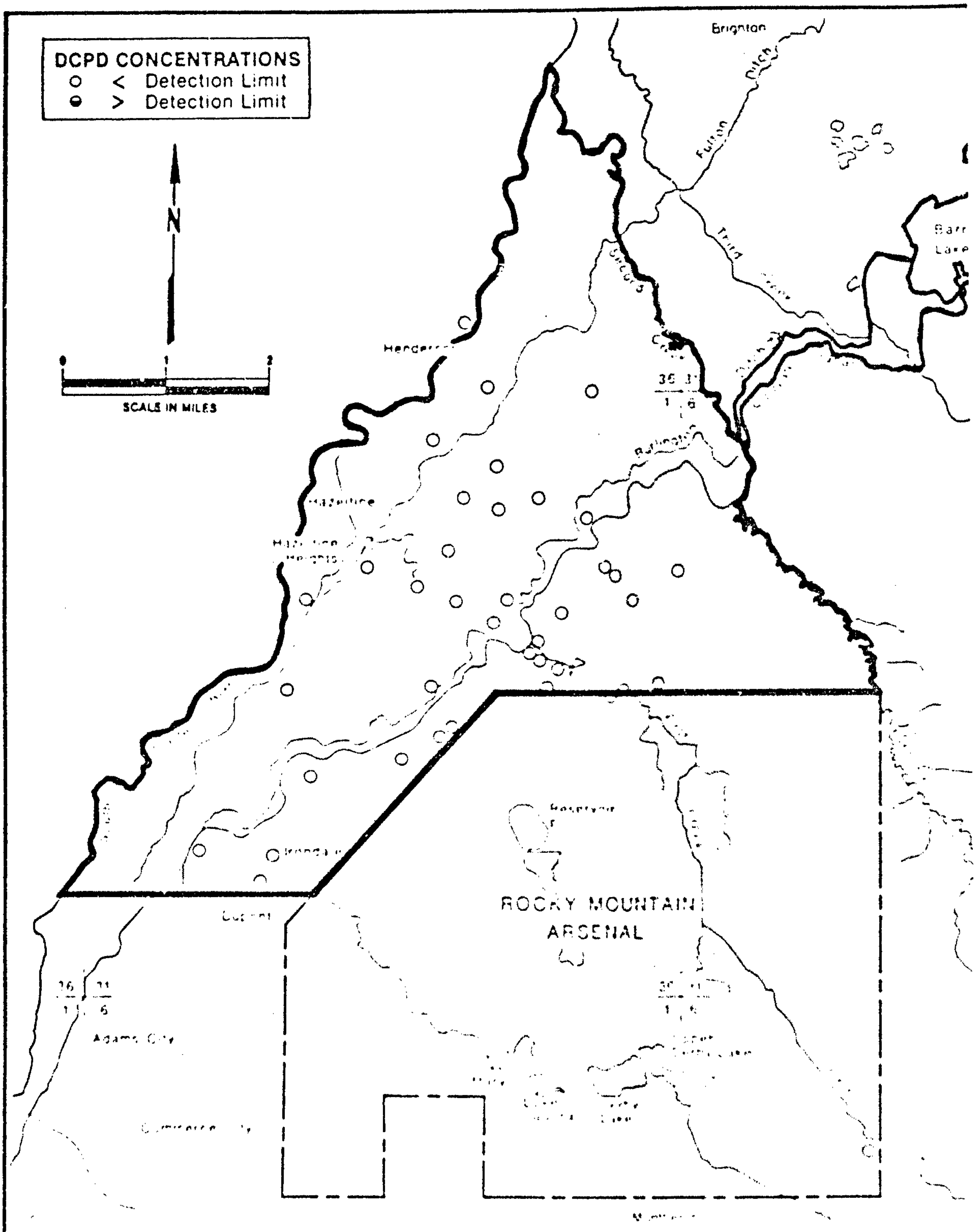


Figure I-9
DCPD ASSESSMENT RMA OFFPOST FIRST QUARTER SAMPLING OF WELLS
SOURCE: ESE 1987

Prepared for:
U.S. Army Program Manager's Office
For Rocky Mountain Arsenal
Aberdeen Proving Ground, Maryland

APPENDIX J

COMMENTS AND RESPONSES TO THE OFFPOST OPERABLE UNIT REMEDIAL INVESTIGATION AND CHEMICAL SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, DRAFT FINAL REPORT (VERSION 2.1), AUGUST 1988

The Task 39 Offpost Operable Unit Remedial Investigation and Chemical Specific Applicable or Relevant and Appropriate Requirements Draft Final Report was distributed on September 30, 1988 to all Organizations and the State (OAS). Comments were received from the Colorado Department of Health on November 3, 1988; the U.S. Environmental Protection Agency on November 14, 1988; Shell Oil Company on November 14, 1988; Holme, Roberts & Owen on November 14, 1988; and the U.S. Fish and Wildlife Service on November 14, 1988. All written comments and formal responses are incorporated in the following appendix.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2405

Ref: 8HWM-SR

NOV 14 1990

Mr. Donald L. Campbell,
Deputy Program Manager
Office of the Program Manager
Rocky Mountain Arsenal
ATTN: AMXRM-TO
Commerce City, Colorado 80022-2180

Re: Rocky Mountain Arsenal, (RMA), Offpost Operable Unit Remedial Investigation and Chemical Specific Applicable or Relevant and Appropriate Requirements Draft Final Report, August, 1988.

Dear Mr. Campbell:

We have reviewed the above referenced report and have the enclosed comments. Please contact me at (303) 293-1528, if there are questions on this matter.

Sincerely yours,

Connally Mears

Connally Mears
EPA Coordinator
for Rocky Mountain Arsenal Cleanup

Enclosure

cc: Thomas P. Looby, CDH
David Shelton, CDH
Patricia Bohm, CAGO
Lt. Col. Scott P. Isaacson
Chris Hahn, Shell Oil Company
R. D. Lundahl, Shell Oil Company
David Anderson, Department of Justice

RESPONSES TO EPA COMMENTS ON
REMEDIAL INVESTIGATION FOR OFFPOST OPERABLE UNIT

December 13, 1988

COMMENT

1. Page 3-56, Aldrin and isodrin, observed at concentrations exceeding CRLs, were not addressed here, but were addressed in the endangerment assessment. Why?

RESPONSE

Aldrin and isodrin were not detected offpost in the Spring and Summer 1987 sampling quarters. The remedial investigation (RI) focused on these two quarters because they were by far the most comprehensive sampling events conducted at the time the report was prepared. However, aldrin was detected sporadically at low levels (generally near the certified reporting limit (CRL)) in samples collected from offpost wells during 1985, 1986, and the winter of 1987. Thus, we believe the endangerment assessment (EA) must address aldrin even though the most recent sampling events do not indicate aldrin's presence at detectable levels offpost. Offpost data from previous sampling episodes is provided in the Contamination Assessment Report (CAR), and the Draft Final Water Remedial Investigation which will be released in January.

With respect to isodrin, the text is in error. Isodrin has not been detected in offpost wells since the Revision III-360° Program began monitoring in December of 1985. Thus, isodrin will be deleted from the Offpost Remedial Investigation (RI) text and will not be discussed in the EA.

COMMENT

2. Page 3-67, Section 3.3.1.9, third sentence, insert "were" for "ere".

RESPONSE

The text will be changed to correct this typographical error.

COMMENT

3. Page 3-114, For chloroform, DIMP, CPMSO, and $CPMSO_2$, "systematic deviations" between GC and GC/MS results were noted. It is stated that "these deviations could result in unforeseen problems associated with remedial actions". Text should be revised to describe more fully this systematic difference in concentration between GC and GC/MS methods.

RESPONSE

The "systematic differences" for chloroform, DIMP, CPMSO, and $CPMSO_2$ are described on the last paragraph of page 3-109. The relationship between GC and GC/MS results was not evaluated statistically because the number of samples in which these compounds were detected were relatively small and the concentrations were low (generally in the range of 10 to 20 %g/l).

COMMENT

4. Page 3-132, First paragraph, last sentence, the second "in" should be "is".

RESPONSE

The text will be changed to correct this error.

COMMENT

5. Page 3-143, First sentence, first paragraph, delete the "8".

RESPONSE

The text will be revised to make this correction.

COMMENT

6. Page 3-148, Are projected quantities used in scenario development consistent with South Adams County Water and Sanitation District projections?

RESPONSE

Yes. Each of the two alluvial wells is to pump approximately 400 acre-feet/year (ac-ft/yr) and the recharge is to be 1000 ac-ft/yr. So far in 1988, South Adams County has recharged approximately 800 ac-ft. Also, South Adams County only proposes to add two new production wells in the near future. The text will be revised to reflect these facts.

COMMENT

7. Page 3-149, Section 3.5.4.1, last paragraph, first sentence, replace "area" with "are".

RESPONSE

The text will be revised to make this correction.

COMMENT

8. Page 3-151, Section 3.5.4.3, first paragraph, last sentence, is the value, 29 ug/l, correct?

RESPONSE

No, this value should be 20 %g/l. The text will be revised to make this correction.

COMMENT

9. Page 4-20, Third paragraph. the potential exists for overland flow near First Creek in which backwater could (or could have) accumulate and overtop 96th Avenue contributing to offpost surface water and soil contamination from contaminated areas such as the Toxic Storage Yard or ditches leading from the North Plants or the Sewage Treatment Plant. Recent citizen accounts have indicated that such events may well have occurred. The RI should address the potential for past flood events depositing contaminated sediment outside of stream channels along the First Creek, and other potential pathways. The same type of concern exists regarding dieldrin detections in the O'Brian Canal (see page 5-14). Further, the flow of contaminated groundwater in that area could have lead, or now be leading, to soil contamination, as could the use of groundwater for irrigation (see comment regarding page 1-7, below). It is essential that such possibilities be fully evaluated.

RESPONSE

The Army has also become aware of citizen accounts which indicate that flooding events have created backwater at 96th Avenue and that surface water flow may have overtopped 96th Avenue. Although monitoring of First Creek at the RMA North Boundary indicates this surface water is generally uncontaminated, storm event sampling has not been initiated until recently. Thus, the Army recognizes the importance of evaluating the potential for soil contamination outside the First Creek stream channel and has initiated soil sampling and analysis to help investigate this potential pathway. The Army will be glad to discuss this supplemental program with the EPA at your request and recommendations you may have for further sampling. This data will be provided in an addendum to the RI Report and will be evaluated in an addendum to the EA/FS if unacceptable contaminant exposures as a result of this pathway are indicated.

There are several different issues raised by the other potential pathways mentioned in this comment. First, the detection of dieldrin in O'Brian Canal upgradient of First Creek does not appear related to ground water contamination. The bottom of O'Brian Canal is approximately 20 ft above the water table in the area this sample was collected.

The statement, "The same type of concern exists regarding dieldrin detections in the O'Brian Canal" is interpreted to refer to overland flow from the RMA Northwest Boundary as a potential pathway. As discussed on pages 4-19 and 4-20, there is a potential for overland flow at the RMA Northwest Boundary during severe storm events. However, modeling conducted by the Corps of Engineers (COE) indicates that during a 100-year storm the Basin F drainage basin would not overflow. Since this drainage basin

contains the source areas closest to the RMA Northwest Boundary, erosion of contaminated soils to O'Brian Canal via this pathway appears unlikely. However, the Army will be willing to discuss specific recommendations for soil sampling downgradient of the RMA Northwest Boundary if the EPA believes this is or has been a viable contaminant pathway to O'Brian Canal.

Soil contamination, as a result of the use of ground water for irrigation, has been evaluated as a potential pathway in the EA.

COMMENT

10. Pages 5-11 and 9-4. Reference is made to past disposal of Denver wastewater sludge in Barr Lake. When did this occur? What quantities were disposed and what was the source? Are there records of the chemical composition of the wastewater sludge that support your assertion that the sludges are the source of the heavy metals detected in the sediments?

RESPONSE

The disposal of sludge by Denver Metro occurred in the 1950s and early 1960s. The sludge was placed directly into O'Brian Canal. We were not able to find documentation of what quantities were disposed. We do not feel it is necessary to have documentation of the chemical composition of the wastewater sludge. The presence of heavy metals in wastewater sludge is well documented in the literature. Ms. Carol Leature with Barr Lake State Park was the source of much of our information.

COMMENT

11. Page 1-4. The area between 80th Avenue and areas downgradient of the Northwest Boundary Control System (NWBCS) have been excluded from the off-post RI. Historic information indicates that the DBCP plume currently intercepted by the Irondale Boundary Control System extended into the off-post area. This same area is downgradient of the TCE plume that originates on-post in the West Tier area of RMA. The effects of operating the Irondale system on both the TCE and DBCP plumes should be addressed in a manner similar to the other two boundary control systems.

RESPONSE

The statement that the "area between 80th Avenue and areas downgradient of the Northwest Boundary Control System (NWBCS) have been excluded from the offpost RI" is misleading. The Army has presented extensive monitoring data in this area from the Consumptive Use Phase I and III Programs and continues to monitor dedicated monitoring wells in this area on a routine basis. Full size chemical distribution maps that incorporate this part of the Offpost Operable Unit are available upon request.

These maps were not in the RI report because general contaminants were not detected outside the areas shown on the maps in the RI report.

None of the recent monitoring programs mentioned above have indicated that DBCP, a compound solely related to RMA, continues to persist in this area. However, trichloroethylene (TRCLE) has been sporadically detected. Because there are documented sources of TRCLE to the south of 80th Avenue that are not associated with RMA, the contamination downgradient of the Irondale System can not be traced to a specific source. Because multiple sources are indicated, the EPA should be the lead agency for this area in accordance with Executive Order No. 12580, 52 CFR 2923 (1987). Thus, discussions of the operational effects of the Irondale System on these contamination plumes need not be as detailed as those provided on the North Boundary Containment System (NBCS) and Northwest Boundary Containment System (NWBCS). However, additional discussion will be provided in Section 3.0 of the RI report where the effects of the other two systems are discussed.

COMMENT

12. Page 1-7. The potential for contamination of soil by application of contaminated irrigation water at present or in the past should be addressed by identifying all potential irrigation wells that lie within plume areas. If historic application of ground water contaminated with persistent compounds appears likely, then examination of the potential for soil contamination should be conducted and presented for use in the off-post endangerment assessment.

RESPONSE

The potential for soil contamination via this pathway is being considered by the EA. Irrigation wells that lie within present or historic plumes were identified as a part of the Consumptive Use Programs. The majority of these wells lie downgradient of O'Brian Canal and Burlington Ditch where ground water contaminant concentrations are greatly diminished relative to concentrations closer to the RMA boundary. Nonetheless, the relevant data on irrigation wells is presented again in the EA and this pathway is being evaluated in the exposure assessment.

COMMENT

13. Page 3-48, Two wells were identified with casing in poor condition that may lead to mixing of alluvial and bedrock water. The potential for wells of this type to provide a pathway for migration of contaminated ground water to Denver Formation or Arapahoe Formation aquifers should be addressed.

RESPONSE

The Army agrees that the potential for this pathway needs to be addressed. Currently, the only two Consumptive Use bedrock wells that have shown contamination were the two wells identified in the RI report. The Army believes that the best method of detecting potential cross-contamination problems between aquifers is to monitor bedrock wells on a regular basis. When poorly constructed bedrock wells are identified in areas where alluvial water is contaminated above remedial action levels, the wells will be

abandoned and replaced as necessary. Both monitoring and abandonment/replacement of bedrock wells will be a part of alternatives developed in the FS.

It should be noted that the highest density of bedrock wells are located just north of the RMA North Boundary. During the Consumptive Use Phase I program, analyses of samples collected from these wells did not exhibit any concentrations of target analytes above Certified Reporting Limits (CRLs).

COMMENT

14. Page 3-49. The off-post impact of at least the DBCP plume and potentially the RMA-related TCE plume from the West Tier should be addressed. We need to discuss this issue further.

RESPONSE

As discussed in our response to Comment #11, the most recent monitoring (Consumptive User Phase III) in the offpost area downgradient of the Irondale System did not indicate the presence of DBCP. Data from the Consumptive Use Phase III Report will be discussed in the RI report to support this position. We agree that this issue requires further discussion.

COMMENT

15. Page 3-59. The historic DBCP plume that led to construction of the Irondale System should be addressed.

RESPONSE

We agree that discussion of the historic DBCP plume and the rationale for construction of the Irondale System are appropriate in this section of the report. An appropriate discussion will be added to the text.

COMMENT

16. Page 3-63. The concentration of dieldrin identified as anomalous lies in an area of sparse well control and is along a potential flow path downgradient of elevated dieldrin concentrations on-post. Recharge from the O'Brian Canal and Burlington Ditch have probably diluted the concentrations in the plume.

RESPONSE

The text does not refer to the dieldrin concentrations observed in samples from Wells 37353 and 37355 as anomalous. The text states that the detection of dieldrin do not correlate well with upgradient detections. In the case of both Wells 37353 and 37355, there are at least a half dozen upgradient wells which do not exhibit detectable levels of dieldrin. In neither case however, are we ruling out that this contamination could be attributable to

RMA. We are in agreement that these detections are in areas of sparse well control and downgradient of dieldrin contamination near the RMA boundaries. Thus, monitoring will continue in these areas under the Comprehensive Monitoring Program (CMP) and the need for additional wells upgradient of these areas will be evaluated to help assess the origins of these detections.

COMMENT

17. Page 3-147. At least a rudimentary calibration attempt for contaminants of concern for the future scenario simulations should be conducted to validate the future predictions. In particular, the extreme variation in Kd should be validated by calibration since this parameter is a major control on future contaminant concentration distribution.

RESPONSE

We agree that the variability in Kd values has a major influence on the results of the "no action" simulations, particularly for the relatively immobile compounds such as dieldrin. However, even a rudimentary calibration for the contaminants of concern offpost is difficult because historical offpost data is much less comprehensive than presented in the RI report. As a result, we are not able to reconstruct offpost contaminant distributions with any certainty. As an alternative, we propose to perform "no action" simulations for different Kd values to evaluate the sensitivity of the results of this variable. Our preliminary results suggest that the "no action" simulations are not very sensitive to different Kd values for the extremely mobile compounds such as chloroform and DIMP. A "best estimate" Kd will be determined for dieldrin based upon travel times from onpost source areas. Then, two additional Kd values will be chosen for modeling. One of these values will be selected less than the "best estimate" Kd and one will be selected greater than this value. The purpose of these simulations will be to bracket the actual movement of dieldrin by providing a reasonable range of contaminant migration scenarios. The results of these additional simulations will be provided in the EA/FS Report.

Volume III

COMMENT

1. ARARs were not identified for the following compounds detected in the offpost sampling: chlordane, hexachlorocyclopentadiene, and 1,1,2-trichloroethane.

RESPONSE

These contaminants were not detected offpost in 1987. We do not have any indication that chlordane has ever been detected offpost. Hexachlorocyclopentadiene and 1,1,2-trichloroethane have been detected once and twice respectively since monitoring began for these contaminants offpost. All three of these detections were just above the respective CRL.

We will however identify potential ARARs for these two compounds in the event that they are detected offpost in the future. (Will require DOJ concurrence)

COMMENT

2. Although we normally think it most appropriate for the State of Colorado to comment on potential State ARARs, in light of recent RMA experience with State air pollution regulations we would point out that State odor regulations, and perhaps others, should be considered as potential ARARs.

RESPONSE

State odor regulations are not environmental regulations that constitute standards, requirements, criteria or limitations pertinent to hazardous substances, pollutants or contaminants. Therefore, these regulations have not been designated as potential ARARs within the meaning of 42 U.S.C. Section 9621(d)(2).

COMMENT

3. We have not had the opportunity to make a full compound-specific comparison with potential ARARs. We may supplement our comments on that matter at a later time.

RESPONSE

The organizations are urged to make any supplemental comments on the designated potnetial ARARs no later than January 20, 1989 so that any such additional comments on ARARs may be considered by the Army prior to the issuance of the Offpost Operable Unit EA/FS.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
COLORADO FIELD OFFICE
730 SIMMS STREET
ROOM 292
GOLDEN, COLORADO 80401

IN REPLY REFER TO:

(FWE)

RECEIVED 14 NOV 1988

November 11, 1988

Deputy Program Manager
Rocky Mountain Arsenal
ATTN: AMXRM-PM (Donald L. Campbell)
Building 111 Rocky Mountain Arsenal
Commerce City, Colorado 80022

Dear Mr. Campbell:

We have reviewed Volumes I, II and III of the Offpost Operable Unit RI and Chemical Specific ARARs Draft Final Report (version 2.1) for Task Number 39. Please refer to the specific comments below.

Vol. I, Sec. 4.3 (p. 4-10). Two contaminant pathways to offpost surface water are listed: surface water runoff and erosion plus contaminated ground water discharges to surface channels. Soil and surface erosion by wind action is not mentioned. This is surprising because of the IRA that addressed supression of wind erosion problems in section 36. Is it not possible that surface/contaminant-borne soil and other particles have blown offpost and been deposited within the watersheds that feed back onto or away from the Arsenal? This could be examined with near-surface soil-core samples and testing for surface-borne analytes offpost. However, offpost soil studies conducted so far may have used a core depth great enough to swamp out detection of shallow/surface contamination. It is our contention that airborne surface erosion should be considered and examined at a level of detail which would render it an insignificant factor or a significant factor. If it is shown to be significant, then a description of the process and its past, present and future impacts on surface water contamination should be included in this section. The issue raised here could explain why aldrin and DIMP concentrations were detected in surface waters of First Creek at the southeastern-most edge of RMA (sec. 4.2.1 p. 4-4, Table 4.2-1 and Fig. 4.2-1 for sample location 08400). Figure 4.3-2 would suggest that this contamination occurred via a recharge phenomenon; does the ground water move in this direction? We request that you consider whether or not surface air-borne contaminants may have moved to some degree offpost (i.e., down wind). For this reason, we would be interested in any contaminant data you may have pertaining to offpost biota to the east, southeast and south of RMA (i.e., downwind) to help us judge this issue in relation to the contamination of fish and wildlife in the total offpost area.

Vol I, Sec 5.0. The data presented in Tables 5.1-2, 5.2-1 and 5.3-1 are confusing. The latter table specifies the basis of expression is ug metal/gm dry sediment. The former two tables do not indicate the basis of expression, i.e., whether it is on a dry, wet or other basis. The methodology section

pertaining to these results (sec. 2.3, p. 2-24) specifies that the sediment samples were centrifuged to remove excess water prior to extraction and analysis. Please provide us with an explanation for the basis of expression for all data in Sec. 6.0. Without this we have no valid way to assess the relevance of contaminant concentrations in offpost sediments.

Vol I, Sec. 7.0. Our concerns about studies of biota for this operable unit center around the general approach and the specific investigation, as well. First, there is no indication of studies of contaminants in biota that reside in the offpost operable unit. Rather, the studies focused entirely on movement of animals from onpost to offpost and the possible 'export' of contaminants in this manner. The movement studies indicated that pheasants, to a limited extent, and no cottontail rabbits could be expected to move back and forth across the RMA north boundary. We are concerned with the possibility that offpost contamination has resulted in contamination in offpost biota that never comes onto RMA. Please provide some explanatory response to this concern.

The remainder of our comments about sec. 7.0 pertains to the movement studies.

Vol I, Sec. 7.1. The title is misleading. Because no summer movements and wintertime movements of only one bird were monitored, the title should read Results of Fall Movements. Home range implies year-round monitoring which was not done.

Vol I, Sec. 7.1.1. On p. 7-1, how was death from natural causes determined for pheasants found dismembered with the transmitter found nearby? Also, were any of the animal carcasses found intact with accompanying transmitters analyzed for contaminant concentrations? Transmitter effect on the natural movement of experimental birds is never mentioned. Was there a period of adjustment to the stress caused by handling/radio-fitting afforded each animal before data were collected from it? We are aware of some studies in which transmitter effects on the animals totally negated the validity of movement data. Who placed a reward band on the pheasant recovered 7.5 miles from the Arsenal? More details are needed on this. What does the term radio-collar mean? We are not familiar with collars used on birds. Usually a harness or tail clip type of radio attachment is used on birds. Sex should be indicated in Table 7.1.1. Why was 20 locations used as the cutoff for valid (?) movement data (top p. 7-3)? There was an admitted relationship between number of locations and activity range, i.e., more locations yielded a larger range. Perhaps pheasants with smaller ranges exhibited a radio effect. If a radio effect existed, at what point in time after radio-fitting did it cease to be a factor? Radio effect needs to be brought in the discussion in this section. In para. 3, p. 7-3, references should be given and casual observations should be expounded upon. In para. 4, p. 7-3, the first and last sentences are contradictory. Seasonal movement patterns could not be compared because only one pheasant was monitored during winter.

Vol I, Sec. 7.2, 5th para, p. 7-4. The statement about "the data obtained provide an objective and quantitative basis for evaluating potential pathways offpost" seems to hang out there in the face of admitted problems with the study. And, as mentioned above, contamination in resident biota offpost is not presented. Lack of evaluating or considering a potential radio effect surely weakens the results. Some studies have found aberrant behavior and

restrictive movements exhibited by radio-fitted animals. The interpretation at least warrants this consideration. The pheasant that moved 7.5 miles offpost was apparently not radio-fitted but it was reward-banded. Perhaps this bird is more representative than were the radio-fitted birds. If so, a reward-banding study could have been more enlightening. Also, the population of lost transmitters may have included animals that moved offpost. In para 2, p. 7-12, the draft Biota RI (ESE, 1988) should not be cited as a reference. It is not listed in the references and probably has not been released for our review yet.

In summary of Section 7.0, the discussion of findings in 7.2 appears to present a fair and objective assessment of the limitations and findings of the radio-tracking studies. A stronger opinion about the strengths of the study is what is transmitted prior to this point, however. Lastly, the Evaluation of Biota Contaminant Pathways given in sec. 7.3 does not include mention of existing offpost contamination and its potential to contaminate offpost plants or animals.

Volume II. No comments.

Volume III. In Appendix H, p. vii, we would like to see listed in this section the tolerances and action levels on or in raw agricultural commodities that were indentified in para. 3. These data could be shown in the section on Potential Chemical-Specific ARARS for the EA for the Offpost Operable Unit, RMA.

Thank you for the opportunity to review the subject documents. For any questions pertaining to our comments, please contact Rod Deweese of this office at 303-236-2675 or FTS 776-2675.

Sincerely,

LeRoy W. Carlson
Acting State Supervisor

RESPONSES TO FISH AND WILDLIFE SERVICE COMMENTS ON REMEDIAL INVESTIGATION FOR THE OFFPOST OPERABLE UNIT

December 13, 1988

COMMENT

Vol. 1, Sec. 4.3 (p. 4-10). Two contaminant pathways to offpost surface water are listed: surface water runoff and erosion plus contaminated ground water discharges to surface channels. Soil and surface erosion by wind action is not mentioned. This is surprising because of the IRA that addressed suppression of wind erosion problems in section 36. Is it not possible that surface/contaminant-borne soil and other particles have blown offpost and been deposited within the watersheds that feed back onto or away from the Arsenal? This could be examined with near-surface soil-core samples and testing for surface-borne analytes offpost. However, offpost soil studies conducted so far may have used a core depth great enough to swamp out detection of shallow/surface contamination. It is our contention that airborne surface erosion should be considered and examined at a level of detail which would render it an insignificant factor or a significant factor. If it is shown to be significant, then a description of the process and its past, present and future impacts on surface water contamination should be included in this section. The issue raised here could explain why aldrin and DIMP concentrations were detected in surface waters of First Creek at the southeastern-most edge of RMA (sec. 4.2.1 p. 4-4, Table 4.2-1 and Fig. 4.2-1 for sample location OSADD). Figure 4.3-2 would suggest that this contamination occurred via a recharge phenomenon: does not ground water move in his direction? We request that you consider whether or not surface airborne contaminants may have moved to some degree offpost (i.e., downwind). For this reason, we would be interested in any contaminant data you may have pertaining to offpost biota to the east, southeast and south of RMA (i.e., downwind) to help us judge this issue in relation to the contamination of fish and wildlife in the total offpost area.

RESPONSE

Based upon a preliminary review of this pathway, the Army does not believe that the windblown pathway is a significant exposure route in the Offpost Operable Unit. To address your concern over this potential pathway the Army would first like to discuss the plausibility of the pathway by evaluating the potential for it to occur. For example, an evaluation could be effectively accomplished by performing long-term air dispersion and deposition modeling. If the results of this assessment indicate the potential for significant migration of contaminants via this pathway, then sampling would be performed using the modeling results as a guide. Again, we are willing to discuss your recommendations but would also like to explore other approaches to the evaluation of this potential pathway.

COMMENT

Vol. I, Sec. 5.0. The data presented in Tables 5.1-2, 5.2-1 and 5.3-1 are confusing. The latter tables specifies the basis of expression is ug metal/gm dry sediment. The former two tables do not indicate the basis of expression, i.e., whether it is on a dry, wet or other basis. The methodology section pertaining to these results (Sec. 2.3, p. 2-24) specifies that the sediment samples were centrifuged to remove excess water prior to extraction and analysis. Please provide us with an explanation for the basis of expression for all data in Sec. 5.0. Without this we have no valid way to assess the relevance of contaminant concentrations in offpost sediments.

RESPONSE

All concentrations are expressed in terms of dry sediment. The text will be revised to clarify this.

COMMENT

Vol. I, Sec. 7.0. Our concerns about studies of biota for this operable unit center around the general approach and the specific investigation, as well. First, there is no indication of studies of contaminants in biota that reside in the Offpost Operable Unit. Rather, the studies focused entirely on movement of animals from onpost to offpost and the possible "export" of contaminants in this manner. The movement studies indicated that pheasants, to a limited extent, and no cottontail rabbits could be expected to move back and forth across the RMA north boundary. We are concerned with the possibility that offpost contamination has resulted in contamination in offpost biota that never comes onto RMA. Please provide some explanatory response to this concern.

RESPONSE

Offpost studies of other media (e.g., surface water, ground water) were being conducted simultaneously with the investigation of animals movements. No investigations of contamination in offpost biota were conducted because potential offpost sites of contamination (e.g., contaminated surface waters or sediments) had not been identified at the time of the study. The assessment of hazards to offpost biota are being addressed in the Offpost Endangerment Assessment (EA) that is currently being prepared.

Pheasant and cottontail studies were initiated to address the specific concern regarding the potential of human exposure offpost via wildlife that were potentially contaminated on RMA. The study design involved capturing animals within RMA along boundaries where the animals might be expected to move offpost, be hunted, and subsequently consumed by humans. Tracking studies followed these animals to determine if the size of the home ranges [illegible] and hunting would permit individuals to move from sites of contamination onpost to the Offpost Operable Unit. For a

variety of reasons already discussed in the text sample sizes were small, yet the study did produce results that indicated movement of pheasants from onpost areas to the adjacent offpost areas. More quantification may have been useful, but the study did achieve its objectives and is sufficient for the conduct of an EA/FS on this potential pathway.

COMMENT

Vol. I, Sec. 7.1. The title is misleading. Because no summer movements and wintertime movements of only one bird were monitored, the title should read Results of Fall Movements. Home range implies year-round monitoring which was not done.

RESPONSE

Most of the pheasants monitored during the study were monitored from August through November, therefore more than fall movements were monitored. Pheasants were deliberately monitored during August before they would be expected to disperse from the Rocky Mountain Arsenal (RMA) and change their seasonal use locations between summer and fall seasons. Depending on the animal group addressed, the term home range may imply year-round range, seasonal range, or lifetime range. Because most pheasants were monitored for more than one season, we believe that home range is a more appropriate term than fall movements for the title of this section.

COMMENT

Vol. I, Sec. 7.1.1. On p. 7-1, how was death from natural causes determined for pheasants found dismembered with the transmitter found nearby? Also, were any of the animal carcasses found intact with accompanying transmitters analyzed for contaminant concentrations? Transmitter effect on the natural movement of experimental birds is never mentioned. Was there a period of adjustment to the stress caused by handling/radio-fitting afforded each animal before data were collected from it? We are aware of some studies in which transmitter effects on the animals totally negated the validity of movement data. Who placed a reward band on the pheasant recovered 7.5 miles from the Arsenal? More details are needed on this. What does the term radio-collar mean? We are not familiar with collars used on birds. Usually a harness or tail clip type of radio attachment is used on birds. Sex should be indicated in Table 7.1-1. Why was 20 locations used as the cutoff for valid (?) movement data (top p. 7-3)? There was an admitted relationship between number of locations and activity range, i.e., more locations yielded a larger range. Perhaps pheasants with smaller ranges exhibited a radio effect. If a radio effect existed, at what point in time after radio-fitting did it cease to be a factor? Radio effect needs to brought in the discussion in this section. In para. 3, p. 7-3, references should be given and casual observations should be expounded upon. In para. 4, p. 7-3, the first and last sentences are contradictory. Seasonal movement patterns could not be compared because only one pheasant was monitored during winter.

RESPONSE

Death from natural causes was assumed if the transmitter was found mangled (e.g., the insulation on the antennae was chewed) as if the pheasant had been killed by a predator and/or if the animal's recent movements indicated that the animal was active and apparently healthy prior to its discovery as a deceased individual.

Tissue analyses of pheasants found dead on RMA were beyond the scope of this investigation. A RMA-wide study of contamination and contaminant effects in pheasants was conducted as part of the overall RMA Biota Assessment Task and is included in the Biota RI document scheduled for review in early 1989.

Pheasants were captured during the late evening hours and were tracked starting on the following day. None of the pheasants tracked made any significant change in habitat during the period following their initial capture. Most stayed in the same general habitat as when captured. Released pheasants flew readily and with no apparent difficulty. Dunke and Pils (1973) reported that pheasants adjusted to transmitters within 1 to 2 days. Hanson and Progulske (1973) found that pheasants in their study that had been equipped with radiotransmitters did not show signs of physical hindrance. The pheasants tracked in the RMA study were tracked for extended periods of time, thus any reduction in movements that may have occurred during the first two days of movement should not have significantly affected overall results. One study (Hessler et al., 1970) suggested that radiotransmitters lowered survival of pheasants, but the birds used in this investigation were raised in captivity and released into a foreign environment. These factors are known to reduce the survivorship of released animals.

Biologists from ESE placed the reward bands on all pheasants released with transmitters as a supplemental means of obtaining data, not as a separate study.

The term radio collar is equivalent to a bib transmitter. Both bib and harness transmitters were tested during a pilot study. The bib collar was selected because it was less easily lost by active birds than was the harness. The bib collar we used consisted of a single piece of material that was cut to fit (like a collar) over the head of each pheasant. The sex of the pheasants will be added to Table 7.1-1.

In the calculation of home ranges, increase in calculated home range size levels off after a sufficient number of captures has been reached. The cutoff point of 20 sightings was selected for the estimation of minimum home ranges based on past studies (Rose, 1982; Jennrich and Turner, 1969, and others) that have shown this to be a sufficiently large number to estimate the minimum home range of most species. The study design attempted to locate pheasants at different times of day and at different seasons to account for daily and seasonal shifts in movement between different use areas.

The objective of the RMA pheasant study was to determine if minimum home ranges were large enough to permit individuals exposed to sites of contamination on RMA to move offpost, and not to simply estimate the home range of pheasants. The study accomplished this objective in spite of the loss of pheasants throughout the investigation. Pheasants with smaller home ranges may have exhibited a radio effect, but this does not alter finding that some RMA pheasants did move offpost.

COMMENT

Vol. I, Sec. 7.2, 5th para., p. 7-4. The statement about "the data obtained provide an objective and quantitative basis for evaluating potential pathways offpost" seems to hang out there in the face of admitted problems with the study. And, as mentioned above, contamination in resident biota offpost is not presented. Lack of evaluating or considering a potential radio effect surely weakens the results. Some studies have found aberrant behavior and restrictive movements exhibited by radio-fitted animals. The interpretation at least warrants this consideration. The pheasant that moved 7.5 miles offpost was apparently not radio-fitted but it was reward-banded. Perhaps this bird is more representative than were the radio-fitted birds. If so, a reward-banding study could have been more enlightening. Also, the population of lost transmitters may have included animals that moved offpost. In para. 2, p. 7-12, the draft Biota RI (ESE, 1988) should not be cited as a reference. It is not listed in the references and probably has not been released for our review yet.

In summary of Section 7.0, the discussion of fine ngs in 7.2 appears to present a fair and objective assessment of the lim cations and findings of the radio-tracking studies. A stronger opinion about the strengths of the study is what is transmitted prior to this point, however. Lastly, the Evaluation of Biota Contaminant Pathways given in Sec. 7.3 does not include mention of existing offpost contamination and its potential to contaminant offpost plants or animals.

RESPONSE

Shortcomings and problems that weakened the data were presented earlier in the section, and in the first part of the sentence. We agree that the results were less quantitative than would have been possible with larger sample sizes and less disturbance, nevertheless the investigation results were objective and quantitative to the extent possible under the circumstances. Therefore, the additional effort and expense was not considered justified.

Contamination in resident biota are addressed in the Biota RI document which will be released early in 1989. The assessment of risk offpost from pheasant's contaminated onpost is being addressed as part of the Offpost Endangerment Assessment that is also currently being prepared. Comments on the effect of radio transmitters were addressed in the previous response.

The pheasant that moved 7.5 miles offpost had been equipped with a radio transmitter, but the device had been lost. A reward banding study might have been more enlightening, but would have involved substantially more effort that the current study with no guarantee of a proportional increase in pertinent information. The study did demonstrate that RMA pheasants do move offpost, and that pheasants from RMA are obtained by hunters. The quantification of risks as a result of these movements is addressed as part of the Offpost Endangerment Assessment document that is currently being prepared.

No biological sampling was conducted in the offpost study area because of limited extent of offpost contamination from RMA that was detected. Contaminants of concern to biota were detected in sediments and surface waters at low levels. Biota sampling under these circumstances was not considered appropriate or necessary because hits above detection limits for contaminants in these media were at low levels, were sporadic, and for some contaminants (e.g., organochlorine pesticides) the source could not be attributed exclusively to RMA. The hazard to offpost biota as a result of this contaminant is addressed in the Offpost Endangerment Assessment that is currently being prepared.

COMMENT

Volume III. In Appendix H, p. vii, we would like to see listed in this section the tolerances and action levels on or in raw agriculture commodities that were identified in para. G. These data could be shown in the section on Potential Chemical-Specific ARARs for the EA for the Offpost Operable Unit, RMA.

RESPONSE

The tolerances and action levels on or in raw agricultural commodities will be provided in conjunction with the section on designated (no longer potential) chemical-specific ARARs in the Offpost Operable Unit EA/FS.

HOLME ROBERTS & OWEN

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EDWARD J. MCGRATH

November 11, 1988

Mr. Donald Campbell
Office of the Program Manager
for Rocky Mountain Arsenal
Attn: AMXRM-PM/Mr. Donald Campbell
Rocky Mountain Arsenal, Building 111
Commerce City, Colorado 80022-2180

Re: Shell Comments on Offpost Remedial Investigation Potential ARARs

Dear Mr. Campbell:

Shell Oil Company submits the attached comments on Appendix H of the draft final report on the Offpost Remedial Investigation.

Very truly yours,

T. F. Cope

for Edward J. McGrath

EJM:TFC:cg
Enclosures
cc: Office of the Program Manager for Rocky Mountain Arsenal
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Shell Oil Company

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November 11, 1988

RECEIVED 14 NOV 1988

Office of the Program Manager for Rocky Mountain Arsenal
ATTN: AMXRM-PM: Mr. Donald L. Campbell
Rocky Mountain Arsenal, Building 111
Commerce City, Colorado 80022-2180

Dear Mr. Campbell:

Enclosed herewith are a portion of Shell Oil's comments on the Draft Final Report entitled "Offpost Remedial Investigation and Endangerment Assessment and Applicable or Relevant and Appropriate Requirements". Comments on potential chemical-specific ARARs will be sent under separate cover.

Sincerely,

W. E. Alcock
for C. K. Hahn
Manager
Denver Site Project

WEA:ajg

Enclosure

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RESPONSES TO SHELL OIL (SHELL) COMMENTS
ON REMEDIAL INVESTIGATION FOR OFFPOST OPERAB[illegible]E UNIT

December 13, 1988

General Comments

Presently, there are only [illegible] monitoring wells in the four-square mile area (Sections 11 to 14) located directly north of the North Boundary Containment System. [illegible] the limited [illegible] data that was obtained from these wells, it would be difficult to infer continuous plumes with clean-cut contours [illegible]. [illegible] the data base and its interpretation [illegible] any future feasibility studies.

[illegible] distributions, the geologic [illegible] channels are not [illegible] monitoring wells in [illegible] to define channels through [illegible]

[illegible] can be determined. [illegible] and ground water flows [illegible] some penetrometer [illegible] additional water [illegible] distribution and fate of these [illegible] area, the area [illegible] between [illegible] well and Well [illegible]

[illegible]

[illegible] general comment which need to be addressed [illegible] refinements to the offpost ground water [illegible] for remedial design. Currently, the Army is [illegible] plans to collect additional ground water data offpost. We suggest [illegible] be held with Shell to discuss specific recommendations so that they can be evaluated for inclusion into further offpost data collection efforts.

Although the Army recognizes that additional ground water quality data will be required at the remediation design stage, we believe that the existing conceptualization of the nature and extent of contamination in the offpost areas described in your comments is sufficient to conduct a Feasibility Study (FS).

We are in agreement that the isoconcentration lines are, in some instances, interpolated over significant distances, particularly in the area between Wells 37391 and 37367 as identified in your comments. The Army is willing to supplement its monitoring network in this area to support remedial design and will incorporate your comments.

Although additional geologic and lithologic data will help to refine offpost paleochannels in Sections 12, 13, and 14, the two paleochannels which exert a strong influence on offpost alluvial contaminant migration (i.e., the First Creek and Northern Pathways) have been characterized sufficiently to identify them as primary pathways. We believe the hydrogeologic and geochemical data is sufficient to support a FS.

We are not in agreement that more data is needed before the need for remediation can be determined. The nature of offpost contamination has been reasonably determined Although the extent of alluvial contamination will have to be refined for design of remediation systems, we believe the characterization is sufficient to determine whether unacceptable risks are posed by offpost contamination. Thus, the need for remediation can be evaluated.

SPECIFIC_COMMENTS

COMMENT

1. Page_1-1, second paragraph.

   If examples are to be listed, arsenic and mercury should be included.

RESPONSE

The list of contaminants presented on page 1-1 was not intended to be all-inclusive. Emphasis was placed on listing contaminants which have migrated to offpost areas. Arsenic has migrated to offpost areas at levels just above the detection limits and will be listed. However, mercury was detected only once in the Spring and Summer 1987 quarterly sampling event conducted offpost. The addition of mercury to this introductory list is not appropriate.

COMMENT

2. Page_1-3, last paragraph.

   Given the Army's new policy on access to the RIC, shouldn't the Task 39 Technical Plan and supporting documents be in the JARDF?

RESPONSE

All materials relevant to the Offpost Operable Unit will be included in the administrative record in the JARDF at the time of issuance for comment to the Offpost Operable Unit Endangerment Assessment EA/FS.

COMMENT

3. Page 1-3, last line.

   Trichloroethene is referred to, yet throughout page 1-4 references are made to trichloroethylene. The authors should be consistent with their nomenclature.

RESPONSE

The text will be revised to consistently refer to this compound as trichloroethylene.

COMMENT

4. Page 1-4, second paragraph.

Is the last sentence true? The area between 80th and 88th Avenues would be in the Off-Post Area. Under paragraph 8.1 of the RI/FS Process Document, the Army is Lead Agency. How can EPA have jurisdiction over TCE "as per previous agreements with the Army"?

RESPONSE

An Executive Order No. 12580, 52 CFR 2923 (1987) established that the EPA would be the lead agency in areas where multiple sources are suspected. Because documented sources of trichloroethylene and other volatile organohalogens exist to the south and upgradient of the area in question, it is the Army's position that the EPA will have jurisdiction over the cleanup in this area.

COMMENT

5. Page 1-5, paragraph 1.2.1.

Shouldn't the description of the North Boundary System also mention the recharge trenches?

RESPONSE

Construction of the recharge trenches was just beginning at the time this Draft Final Report was being prepared. The text will be revised to reflect the addition of the recharge trenches.

COMMENT

6. Page 1-6, second paragraph.

CERCLA should be defined as the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act. We never refer to SARA separately in the Consent Decree or the RI/FS Process Document: it is a part of CERCLA.

RESPONSE

There is no disagreement that CERCLA was simply amended by SARA. The fact that SARA was listed separately is only intended to indicate that the RI is not inconsistent with CERCLA and the SARA amendments. In the future, the Army will simply refer to CERCLA.

COMMENT

7. Page 1-8, last paragraph.

The Army should clarify that its preliminary evaluation of ARARs is a preliminary evaluation of potential ARARs.

RESPONSE

The text will be revised to clarify that only an identification of potential chemical specific ARARs have been identified in the RI report.

COMMENT

8. Page 1-10. Figure 1.0-2 should be corrected to include the surface waters of the O'Brian Canal and the Burlington Ditch from their confluence with Second Creek to Barr Lake. It might also help to avoid misunderstandings if the figure made clear that only the surface waters of Barr Lake are included.

RESPONSE

This figure will be revised to include the O'Brian Canal and Burlington Ditch from their confluence with Second Creek to Barr Lake. The figure will also be revised to make clear it is the only lake being examined in the RI.

COMMENT

9. Page 3-12. Section 3.2.1. second paragraph.

This paragraph implies that the alluvium and Upper Denver are functionally equivalent. While it is hard to disagree that these two formations are in contact. it may still be premature to say that hydrologically these two formations function as one unit.

RESPONSE

The text states that in areas of subcropping Denver Fm sandstones, the alluvium and Denver Fm are considered hydraulically connected and can act as one hydrogeologic unit. This statement implies that flow within the upper Denver Fm under these circumstances can occur under unconfined conditions because of the relatively high hydraulic conductivity (K) of the Denver sandstones and minimal contrast in K values between the Denver Fm and alluvium in these areas.

The explanation of this localized phenomenon will be expanded in the text to avoid any misinterpretations.

COMMENT

10. Page 3-50, Section 3.3.1.1.

This section should, but does not, provide a statistical treatment of the analytical data. See EPA "Guidance on Remedial Investigations Under CERCLA," at 3-4, and 8-11 to 8-12 (June 1985).

RESPONSE

There is no discussion of the need for statistical treatment of data in the more recent EPA Guidance Document of March 1988.

The cited references would seem to deal more with data validity. A discussion of the QA/QC data is provided in Section 3.3.3, however, we do not believe that there is enough QA/QC data to warrant a rigorous statistical treatment. Because the intent of your comment is not clear, we are willing to discuss it with you if we have not addressed your concern.

COMMENT

11. Pages 3-50 - 3-54.

The data presented in Tables 3.3-1 and 3.3-2 provides a listing of the frequency of detection and range of concentrations for target analytes for samples collected from the alluvial aquifer. It is assumed that the detection limits, i.e., CRLs, are derived by USATHAMA protocols and that the detection limits are laboratory-specific and method-specific. If this is the case, the report should reflect this information in this section.

Also, the tables should identify the analytical methods, i.e., GC/MS, GC/electron capture detector, ICP, etc., for each compound listed. In many cases more than one analytical method is available, and it is not clear from Table 3.3-1 whether the number of concentration exceeding CRLs represents data from one method or several analytical methods.

RESPONSE

The information requested is provided in Table 2.1-4, on pages 2-14 and 2-15. The assumption that CRLs are derived by USATHAMA protocols and are laboratory- and method-specific is correct. The data provided in Table 3.3-1 represent only one analytical method for all the analytes but two. Mercury and arsenic were analyzed by different methods in the Denver and Gainesville laboratories as specified in Table 3.3-1.

COMMENT

12. Pages 3-51 - 3-52, paragraphs 2 and 3.

The report states that aldrin and isodrin were not observed at concentrations exceeding CRLs in samples from wells in the Offpost Operable Unit. The report continues, however, with the following statements:

> "Aldrin and isodrin were observed at concentrations exceeding CRLs in analyses from previous sampling episodes. Although these analyses will not be discussed further here, they will be addressed in the endangerment assessment."

The endangerment assessment should be based upon information presented in the RI. Historical information from previous sampling campaigns, and possibly of questionable quality, should not be incorporated in the endangerment assessment.

RESPONSE

The Offpost Endangerment Assessment (EA) has evaluated data from one additional sampling quarter, Winter 1987 (March, April 1987) or from all data collected in 1987 (i.e., the RI only presents data from the Spring and Summer 1987 Quarter) and was also detected sporadically offpost during 1985 and 1986 sampling events. Because aldrin was detected in the Winter 1987 sampling quarter and detected sporadically offpost during 1985 and 1986, it has been evaluated by the EA. Isodrin has not been detected in the Offpost Operable Unit since the Revision III-360° Program began monitoring in December of 1985 and will not be evaluated by the EA. The text will be revised to reflect these facts.

The Winter 1987 data were not included in the RI because the most recently installed offpost alluvial wells (23 wells) were not available for sampling during the Winter 1987 quarter. Thus, the limited number of analyses obtained during the Winter 1987 quarter would have provided little if any additional information which had not already been presented in the Contamination Assessment Report (CAR) (ESE, 1987). For this reason, data from the Winter 1987 quarter were not presented in the RI report. However, data from the Winter 1987 quarter were used in the EA to provide a larger data base with which to evaluate the variability in contaminant concentrations from critical wells (i.e., 37344, Boller, etc.). Chemical data obtained from offpost wells during the Winter 1987 quarter will be provided in the Draft Final version of the RMA Water Remedial Investigation.

COMMENT

13. Page 3-102, Section 3.3.4.4.

> It should be noted that, in particular, the confirmation of dieldrin or endrin in offpost ground water by GC/MS has not been possible in any of the analyses.

RESPONSE

Confirmation of dieldrin and endrin in offpost ground water by GC/MS would not be expected because the GC/MS Method Detection Limits are approximately three to four times higher than the highest offpost concentrations detected by the GC method. The substantial differences between organochlorine pesticide detection limits for the GC and GC/MS methods are discussed in Section 3.3.4.4.

12/28/88

COMMENT

14. Page 9-1 through 9-3.

A discussion of the Irondale Groundwater Contaminant System should be included here with the other systems since the downgradient groundwater is within the Offpost Operable Unit.

RESPONSE

We will provide a brief discussion of the Irondale ground water containment system here even though the areas downgradient of the system fall under the jurisdiction of the EPA.

NOTE: Comments from Shell on potential ARARs are addressed separately.

STATE OF COLORADO

COLORADO DEPARTMENT OF HEALTH
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Phone (303) 320-8333

RECEIVED
16 NOV 1988
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Roy Romer
Governor

Thomas M. Vernon, M.
Executive Director

November 15, 1988

Mr. Donald Campbell
Office of the Program Manager for
Rocky Mountain Arsenal
Attn: AMXRM-PM, Building 111
Commerce City, CO 80022-2180

RE: The Offpost Operable Unit Remedial Investigation and Chemical Specific Applicable or Relevant and Appropriate Requirements Draft Final Report

Dear Mr. Campbell:

Enclosed are the State's comments on the Offpost Operable Unit Remedial Investigation and Chemical Specific Applicable or Relevant and Appropriate Requirements Draft Final Report. The report presents a more rigorous discussion of groundwater contamination than the Army has presented in the past. Nonetheless, there are numerous areas of concern that have not been addressed. Those areas are discussed in detail in the enclosed comments.

As the report is or will be available to the public, we suggest that it not be finalized due to the recognized need to collect further data and because further data collection may change conclusions that appear in the text. If the report is finalized, the Executive Summary should include a statement acknowledging that additional information is being collected and may alter the conclusions. Such a statement is important so that the public is not misled with respect to the nature and extent of contamination affecting offpost areas.

As you know, the report contains a vast amount of information. The State reviewed these data as extensively as possible in the comment period provided. The State will continue its review and will provide additional comments as necessary.

The Final Task 39 Technical Plan indicates that a number of issues would be addressed in the Offpost Remedial Investigation Report. However, it does not appear that all of those issues have been addressed in the RI report. Therefore, the State has

included several comments which relate to statements made in the Task 39 Technical Plan.

If you have any questions regarding the comments, please contact Mr. Greg Brand with this Division.

Sincerely,

David C. Shelton

David C. Shelton
Director, Hazardous Material and Waste
Management Division

PB/rw

pc: Michael R. Hope
David L. Anderson
Chris Hahn
Edward J. McGrath
Connally Mears
Mike Gaylosh
Lt. Col. Scott Isaacson
Tony Truschel

enclosure

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RESPONSE TO COMMENTS
FROM COLORADO DEPARTMENT OF HEALTH

December 13, 1988

GENERAL_COMMENTS

COMMENT_1

1. Throughout the Offpost Operable Unit Remedial Investigation and Chemical Specific Applicable or Relevant and Appropriate Requirements Draft Final Report, the Army acknowledges that the data collected to date suggest that additional information is needed to fully define the nature and extent of off-post contamination. The State agrees that additional data should be collected. Therefore, the report should not be finalized until sufficient information has been collected, or in the event the report is finalized, a statement should be included in the Executive Summary indicating that data collection is ongoing and that the conclusions set forth in the report may change.

RESPONSE

It is the Army's position that the nature and extent of offpost ground water and surface water contamination have been sufficiently described for conducting an Endangerment Assessment/Feasibility Study (EA/FS). We do recognize the need to collect additional data to support remedial design. However, we believe it would be inappropriate to delay the cleanup of ground water in the offpost area to collect data which will not have an impact on the EA/FS.

The Army has also recognized the need to collect additional data pertaining to other media, such as sediments and soils, in the Offpost Operable Unit. Although the data available suggest that these media have been largely unaffected by contamination from RMA, we are currently collecting additional data relative to these media to supplement the data presented in the Remedial Investigation (RI). If these data suggest that these media will require eventual remediation, they will be addressed in an addendum to the RI and EA/FS reports.

NOTE: Assume 2nd Comment #1 is Comment #2.

COMMENT_2

2. Substantial available sources of relevant data have not been utilized or incorporated in the offpost remedial investigation. The failure to include all available information in the interpretations presented in the offpost remedial investigation may result in an incomplete characterization of the offpost contamination and result in an underestimate of the areas potentially affected by contamination migrating from RMA. The draft report should be redrafted to include currently available data from the following sources:

12/28/88

a. Historical data from the domestic ("DOM") and other ("OTH") series wells. (By failing to include this information in the offpost remedial investigation, a substantially smaller zone of shallow groundwater contamination is depicted in the report than that documented historically. See general comment number 4.)

RESPONSE

Domestic wells have not been constructed to meet specifications for water quality monitoring wells. Thus, water chemistry data from these wells may be of questionable quality. The "DOM" and "OTH" series wells have not been monitored in 1987 and it is not appropriate to include historic data from these wells when constructing chemical distribution maps for 1987.

The chemical distributions obtained from the consumptive use programs were compared to those prepared in the RI and are in general agreement. Permanent monitoring wells were sited to encompass those areas indicating contamination as a result of the consumptive use monitoring. We agree that additional wells will be needed for remedial design downgradient of the irrigation canals where the plumes emanating from RMA are significantly diluted by virtue of recharge from the canals. We will incorporate specific recommendations you may have for selecting locations for additional monitoring wells downgradient of the canals.

COMMENT 2b

b. Historical shallow aquifer contamination data north of 112th Avenue and west of Havana Street documented in the 1987 Offpost CAR and various Army consumptive use program reports. (Without prior knowledge of the Rocky Mountain Arsenal, the public (or any other reader) will not have any concept of the historical extent of contamination. Furthermore, the failure to include this information is misleading in that contamination migration calculations will be based on the present interpretation of the extent of a plume rather than on the historical extent of a plume.)

RESPONSE

A clearer summary of the results of the Offpost CAR (ESE, 1987) and the Consumptive Use Reports will be included in the RI. Much of this background data was included in the Technical Plan and distribution plots from these programs will be included in the Final RI Report.

This comment suggests that contaminant concentrations and distributions in the Offpost Operable Unit have remained relatively unchanged since the Consumptive Use programs were conducted. However, contaminant concentrations have fallen steadily offpost as evidenced by chemical results for samples from monitoring wells downgradient of the RMA north boundary. The Army is willing to address specific data gaps where low levels of RMA contaminants, particularly DIMP, have been detected in the Offpost Operable Unit. But, the Army does not believe that the data collected several years

ago from domestic wells necessarily represents the present extent of contamination. Also, full size drawings showing the distribution of DIMP and other target analytes are available to CDH upon request as indicated in our response to Specific Comment #12.

COMMENT 2c

c. Data collected pursuant to the EPA RMA Offpost RI/FS.

RESPONSE

Data from the EPA RMA Offpost RI/FS are only included to the extent that they impact conclusions reached for areas under the jurisdiction of the Army. It is neither logical nor cost-effective to present data which is relevant only to areas under the jurisdiction of the EPA and has no bearing on the areas being addressed by the Army. However, a summary of potential sources in the EPA study area, resulting plumes that may be impacting the area north of 80th Avenue and a general discussion of the nature and extent of contamination in the Irondale area will be added to the Final RI Report.

COMMENT 3a

3. Data from the following sources should be included in the offpost remedial investigation as soon as it becomes available:

   a. Results from the Tri-County Health Department door-to-door survey in the offpost operable unit area. The survey will better define the location of wells, well depth, how the well water is used, and how long people have lived or worked on the property. The findings of this survey will likely increase the number of known wells which are or have the potential to be contaminated from the Rocky Mountain Arsenal. The Army should be prepared to initiate a comprehensive sampling program for new wells to assess public exposure to RMA contaminants. The results of this sampling program may effect the definition of the extent of contamination in the offpost remedial investigation study area.

RESPONSE

The Army has conducted mail and door-to-door surveys in the Offpost Operable Unit from December 1984 to October 1986 and is confident we have identified most users of alluvial ground water. However, the Army has already stated their willingness to initiate a comprehensive sampling program for new wells identified by Tri-County Health Department. Because the door-to-door survey is just beginning, it is doubtful that analytical data from a future Consumptive Use Program would be available within the next several months. We do not believe that results from additional private well samples will alter the definition of the extent of offpost ground water contamination. Thus, the postponing of remedial actions offpost to wait for additional Consumptive Use data is not warranted.

COMMENT_3b

b. Data from the recently discovered seeps occurring at residences immediately north of the North Boundary Containment System. The State and the Army sampled one of the seeps on November 11, 1988. State data from these samples will be provided to the Army as soon as they are available. If the seep contains contamination associated with the Rocky Mountain Arsenal, these occurrences will need to be investigated further.

RESPONSE

The Army has initiated a program to sample several seeps noted along First Creek just north of the North Boundary Containment System (NBCS). The Army is prepared to conduct a thorough investigation of this potential pathway if preliminary data indicate these seeps are contaminated. Although this information will not be presented in the RI/EA/FS, these data will be evaluated to determine if unacceptable risks are present. If unacceptable risks are identified, remedial action(s) will be implemented as soon as possible to mitigate them. However, we do not believe that remediation of the source of these seeps (i.e., alluvial ground water) should be postponed to wait for the results of this sampling program. This data will be provided in an addendum to the RI and EA/FS reports.

COMMENT

4. As the State's Task 39 and Offpost CAR comments indicate, it is inappropriate to arbitrarily limit the boundaries of the offpost remedial investigation study area. As stated in general comment number 1 above, the historical data base demonstrates that the contaminant distribution from RMA extends beyond the Army's study area. It makes little sense to design and implement an offpost remedy without evaluating all available data. Using a subset of the available data may result in the implementation of an incomplete remedy.

In addition, the north and northeast boundaries of the study area appear to be inhibiting a full definition of the extent of contamination. The limits of the offpost remedial investigation study area must be defined by the extent of contamination adjacent to and migrating from the RMA, not by pre-selected boundaries.

Similarly, it is inappropriate to propose to limit the definition of the extent of contamination hoping that elevated health-based action levels will somehow eliminate the need to define the distal extent of the low level contamination. The NCP requires that the nature and extent of contamination be fully defined as part of the remedial investigation/feasibility study. Furthermore, future toxicological studies may indicate that chronic exposures to low concentrations of RMA contaminants may have adverse public health effects. Therefore, efforts must be made to define the full extent of offpost contamination within the limits of current technology during the offpost remedial investigation.

RESPONSE

The historical data presented in the Consumptive Use Phase I Report (CU Phase I) do not support CDH's comment (ESE, 1985). As presented in this report, the three wells which lie to the north and northeast of the Offpost Operable Unit northern and northeast boundary, did not exhibit detectable levels of any RMA contaminants (DIMP, DBCP, DCPD, chlorinated pesticides, volatile aromatic or volatile organohalogens). Furthermore, as stated previously, the Army contends that the extent of contamination as depicted by the CU Phase I Report and the Offpost CAR are consistent with that presented in the RI.

The second and third paragraph of this comment suggest that the boundaries of the Offpost Operable Unit were set without any consideration of preliminary chemistry and hydrogeologic data. This is not the case since monitoring has been conducted to the north and northeast of the Offpost Operable Unit boundaries. The boundaries have been established based upon preliminary monitoring data and ground water and surface water flow patterns. We believe that the boundaries have been appropriately set incorporating monitoring data and using sound scientific judgement.

COMMENT 5

5. There are an insufficient number of alluvial aquifer monitoring wells northwest of the Northwest Boundary Containment System to define the extent of shallow groundwater contamination. It is impossible to detect contaminants northwest of the Burlington Ditch with the present monitoring system. Sections 15 and 16 only contain monitoring wells at coarse density along their north and south section lines. Additional monitoring wells are needed in Sections 15 and 16 to correct this problem.

   Contaminants such as chloroform and DIMP have been detected historically in the area northwest of the Northwest Boundary Containment System (offpost sections 9 and 10) with the aid of consumptive use wells. A chloroform plume has been preliminarily delineated in this area (Figure F-23), but too few wells exist to define the extent of the contamination. The 1977 Konikow groundwater modeling investigation showed this area to be a significant past contaminant pathway. The northwest plume is a significant pathway that must be fully defined. A plan to fully investigate the northwest plume should be drafted and provided to the MOA parties for review and comment.

RESPONSE

We are in agreement that more monitoring wells will be needed in Sections 15 and 16 for remedial design. The Army is willing to discuss CDH's specific recommendations for additional monitoring in this area. However, CDH should realize that well siting in this area will be more difficult because of lack of access to private land.

The Army believes that the nature and extent of contamination downgradient of the Northwest Boundary Containment System (NWBCS) is reasonably well understood. However, the extent of contaminants which persist in this area (i.e., primarily chloroform, and dieldrin) need further definition for remedial design. A plan for a supplemental technical investigation (STI) will be formulated as a part of alternatives developed in the FS. The results of this monitoring will be provided in the remedial design document for this area.

COMMENT 6

6. There are an insufficient number of upper Denver Formation groundwater monitoring wells up and downgradient of the Northwest Boundary Containment System to determine the extent of upper Denver contamination in this area. The limited monitoring wells upgradient of the Northwest Boundary Containment System indicate the presence of Denver Formation contamination (e.g., aldrin and dieldrin). Therefore, additional monitoring wells up and downgradient of the containment system must be installed to determine the full extent of Denver Formation contamination.

RESPONSE

Substantial monitoring of the Denver Fm downgradient of the North Boundary Containment System (NBCS) has been conducted. The primary contaminant pathway to the Denver Formation (Fm) downgradient of the NBCS was identified in the RI as vertical migration from the alluvial aquifer. Average linear velocities within the most permeable zones of the Denver Fm do not support the potential for extensive lateral migration through the Denver Fm. As such, the potential for Denver Fm contamination downgradient of the NWBCS is expected to be directly related to the level of contamination in the overlying alluvium. Because alluvial aquifer contaminant concentrations downgradient of the NWBCS are generally orders of magnitude less than those observed downgradient of the NBCS, a corresponding decrease in contaminant concentrations in the upper Denver Fm downgradient of the NWBCS is expected. However, the Army realizes the need to evaluate the potential for Denver Fm contamination downgradient of the NWBCS with actual monitoring data. The Army is willing to discuss your specific recommendations for monitoring of the Denver Fm downgradient of the NWBCS and incorporate them into a plan for the STI discussed in our response to Comment #5.

COMMENT 7a

7. While progress has been made in mapping and correlating Denver Formation sand units upgradient and downgradient of the North Boundary Containment System ("NBCS") (including an enhanced understanding of contaminant movement in the Denver Formation along the north boundary, the distribution of contaminants immediately downgradient from the boundary, and the estimation of vertical gradients) two issues must be resolved prior to evaluating remedial alternatives. Those issues are:

a. Contaminated Denver Formation monitoring wells that could not be correlated with sandstone units identified onpost or at the NBCS need to be assessed to determine how the wells became contaminated (i.e., what was and currently is the transport mechanism): and

RESPONSE

We believe that these wells became contaminated primarily as a result of vertical migration from the alluvial aquifer. In the few instances where contamination of the Denver Fm extends beneath the upper sand units at a cluster site, the most probable pathway is migration down poorly constructed Denver Fm wells just upgradient of the detections. For example, a poorly constructed consumptive use well completed in the Denver Fm was abandoned near 96th Avenue and Peoria Street several years ago. The examination of travel times in the Denver Fm, presented on page 3-11d, does not support a theory of lateral migration over significant distances through the Denver Fm. We do not believe that the contamination is the result of lateral migration from near source areas through the Denver Fm. For the majority of organic contaminants, this explanation was reinforced by the absence of contamination in stratigraphically equivalent units upgradient and onpost. Thus, even though several offpost Denver Fm wells could not be correlated with onpost units, we believe that the transport pathways are understood reasonably well.

COMMENT 7b

b. The hydrology and contaminant distribution should be further evaluated to determine if contaminants observed in the Denver Formation are due to lateral movement in sandstone units across the north boundary or by downward movement from the alluvial aquifer to the Denver formation (as evidenced by observed vertical gradients downgradient of the north boundary). The State suspects that both scenarios result in Denver Formation contamination.

RESPONSE

As stated in our response to comment 7a, we believe that the contamination present offpost in the Denver Fm is primarily a result of vertical migration from the alluvial aquifer offpost (either by natural migration or migration down poorly constructed wells). However, we agree that for some compounds, most notably chlorobenzene and benzene, migration pathways are not clear. An evaluation of transport pathways is complicated by large numbers of Denver Fm wells onpost near the north boundary and offpost (for example, bedrock wells have been abandoned onpost near 96th Avenue and just north of RMA) that may have acted or are currently acting as preferred pathways to the Denver Fm. Thus, transport mechanisms to the Denver Fm are complex. Despite this, the travel times within the Denver Fm discussed on page 3-11d do not support the scenario of vertical migration upgradient of the NBCS and then lateral migration to offpost Denver Fm monitoring wells. Additional discussion of pathways to the Denver Fm is provided in the forthcoming Regional Ground Water Flow Modeling at RMA report.

COMMENT_8

8. While progress has been made in identifying nontarget compounds detected in groundwater, efforts must continue to identify additional semi-volatile unknowns, such as UNK 582, UNK 586, UNK 589, UNK 652, and UNK 657. The State agrees that caprolactum, dichlorobenzene and Bis-phthalate should be added to the offpost target analyte list. The State also agrees that additional GC/MS analyses on the acid fraction for semi-volatile organics is necessary. The State further recommends that samples from new monitoring wells constructed under the Composite Well Program be GC/MS screened, particularly wells which will be constructed in the northwest plume area.

RESPONSE

HLA to respond.

COMMENT_9a

9. The State concurs with the need to model the offpost groundwater system to simulate future contaminant concentrations in the alluvial aquifer. However, numerous issues and questions need to be resolved before the findings and conclusions drawn from the modeling effort can be accepted.

a. Harding Lawson Associates ("HLA") has assembled a large data base of aquifer properties and water level information. The offpost modeling effort should utilize the information from the HLA database.

RESPONSE

The ground water flow/transport modeling effort in the RMA Offpost Operable Unit, included all the available information in this area. These data contain all information from previous studies in the area (Konikow, 1975, 1977; Robson, 1976, Warner, 1979; MKE, 1987; Ebasco, 1987; and SACWSD, 1987) as well as data from Tasks 25, 36, and 39 and the most recent information published by ESE (1988). This includes the data from the Water Remedial Investigation Report (WRIR).

COMMENT_9b

b. Kriging was used to estimate aquifer properties and water table elevations (p. 3-145) yet no details are provided in the report. Similarly, a storage coefficient of .05 to .25 was assigned in the model, but no distribution was provided. This information should be included in the report.

RESPONSE

Details of the Kriging, including semi-variograms, are on file and available upon request, but we do not feel this information is appropriate or necessary for the RI report. The Kriging was used to make a first estimate of aquifer properties used in the model. These data were then adjusted during the model calibration procedure to achieve a best fit between the model calculated water table elevation and the observed water table elevation. The Kriging aided in the calibration of the model by minimizing the number of calibration simulations needed to achieve acceptable agreement with water table data.

In the vicinity of the NBCS to the O'Brian Canal a storage coefficient of .05 was used. Elsewhere in the model area a storage coefficient of .25 was used. A discussion of the distribution of storage coefficient values used in the model will be included in the report.

COMMENT 2c

c. A no-flow boundary was used for the contact between the alluvial aquifer and the Denver Formation. A sensitivity analysis should have been performed on the boundary condition to verify the validity of the no-flow boundary assumption. (Leakage from the Denver Formation could be very important to scenarios 3 and 4.)

RESPONSE

Model simulations were conducted to study the impact of leakage from the Denver Formation on flow in the alluvial aquifer. Leakage from subcrops of the Denver Formation as well as upward leakage from the underlying Denver Formation were modeled. This leakage had negligible effect on flow in the alluvial aquifer. With regard to scenarios 3 and 4 (South Adams County Wellfield pumping), the major recharge sources to the alluvial aquifer between the O'Brian Canal and Burlington Ditch and the South Platte River were canal leakage (2400 gpm) and infiltration of irrigation water (2335 gpm). Leakage from the Denver Formation is several orders of magnitude less than this. Thus, the fraction of total flow from the Denver Fm is very small and would have negligible affect on the results of simulations 3 and 4.

COMMENT 2d

d. Similarly, sensitivity analyses should be performed on the northeast and southwest boundaries. Based on the water table map (Figure G-6), these boundaries could be approximated by flow lines (i.e., no-flow boundary.) How were the underflows of these boundaries determined?

RESPONSE

In the calibration simulations the northeast and southwest boundaries were specified head. The calibrated model was then used to calculate the flow across these model boundaries. The model calculated flow quantities across the southwest model boundary were compared with MKE modeling efforts in the nearby area and found to be in reasonable agreement. Note that the aquifer thickness is fairly large along the Southwest boundary which results in significant underflow across this boundary. The aquifer thickness along the northeast boundary is less and the resulting underflow is smaller.

COMMENT_9e

e. It does not appear that a mass balance was computed for the model. Was it? The percent errors for various simulations should be presented in the report.

RESPONSE

Mass balance error for flow and contaminant mass were calculated by the model. This is an internal check in the model. Mass balance errors were less than one percent for flow and less than 2.5 percent for contaminant mass in the model simulations. These overall mass balance results will be added to the text of the RI. Mass balance details are on file and are available upon request.

COMMENT 9f

f. A sensitivity analysis must be completed for the recharge estimates assigned to the Burlington Ditch and the O'Brian Canal. These canals appear to have an important impact on contaminant plumes. If the leakage is overestimated, the steady-state history match will overestimate hydraulic conductivity and result in a model that underestimates flushing times to clean up the aquifer.

RESPONSE

Recharge quantities for canal leakage and percolation of irrigation water were obtained from the MKE recharge study (MKE, 1987). The MKE recharge data were analyzed on a cell by cell basis and used in the current model. No significant changes in the MKE recharge data were made. Minor changes made in the MKE recharge estimates include a reduction in recharge from irrigation in the vicinity of the Fulton Canal, and redistribution of canal leakage to better match water levels during the calibration process It is important to note that total canal leakage was kept constant.

COMMENT 9g

g. The report should indicate how First Creek leakage was treated. Depending upon the location and the time of year, First Creek can be either gaining or losing.

RESPONSE

On average, First Creek loses water to the alluvial aquifer as described in Section 4.0. The average annual leakage from First Creek was determined from flow data obtained at the gages at the North Boundary of RMA and at Highway 2. This recharge to the aquifer was assumed to be constant. Because the bottom of the impoundment along First Creek is always above the water table, while other reaches of First Creek may gain or lose water, the total recharge was assumed to be from the impoundment. A description of how recharge from First Creek was treated will be added to the text.

COMMENT 10

10. The surface water and sediment sampling performed in First Creek are insufficient. As the State's Offpost Contamination Assessment Report comments indicate, the sediment sampling program is insufficient to fully characterize the presence of contaminated sediment in the First Creek/O'Brian Canal drainage system. The offpost remedial investigation merely resampled the two First Creek sample points. Therefore, a more intensive sediment sampling program must be implemented focusing on First Creek, the First Creek impoundment, and the area downstream from the confluence of First Creek and the O'Brian Canal. The samples should be collected at a maximum of 1,000 foot intervals, with at least two samples collected at every location to evaluate local concentration variability.

RESPONSE

The premise of this comment is that the offpost CAR sampling locations were merely resampled. This is not correct. The reviewer is referred to Figure 2.3-1 which shows the latest sampling locations. In particular, it should be noted that two samples were collected and analyzed from the First Creek impoundment. No organic contaminants were detected in these samples. This is a significant finding because the impoundment would be expected to act as a sink for the accumulation of contaminated sediments from First Creek.

The sampling locations along O'Brian Canal and Barr Lake are also different from those in the Offpost CAR. The Army recognizes however, the need to collect additional sediment samples along First Creek and is willing to discuss your specific recommendations. The results of additional sediment sampling and analyses will be provided in an addendum to the RI.

COMMENT 11

11. The State has recently proposed a surficial soils sampling program to assess windblown contamination in non-source areas onpost. The offpost area may also be a receptor of windblown contaminants and should be investigated in a similar fashion. The State proposes that a meeting be scheduled to discuss specific sampling locations.

RESPONSE

Based upon a preliminary review of this pathway the Army does not believe that the windblown pathway is a significant exposure route in the Offpost Operable Unit. The Army is willing to discuss your specific recommendations for sampling locations but would also like to discuss the plausibility of this pathway by evaluating the potential for it to occur. For example, this evaluation could be most effectively accomplished by performing long-term air dispersion and deposition modeling. If the results of this assessment indicate substantial migration of contaminants via this pathway, then sampling could be performed using the model results as a guide. Again, we are willing to discuss your recommendations but would also like to explore other approaches for evaluating this potential pathway with CDH.

COMMENT_12

12. It is evident that remedial actions which will be conducted at RMA are likely to cause significant air emissions which will impact residents offsite. For example, the recent air and odor emissions associated with the closure of Basin F indicate that an offpost air quality monitoring program must be included in the Comprehensive Monitoring Program and operated continuously. Actually, observed data should be used in the offpost endangerment assessment rather than predictive data. The actual monitoring data should also be used to verify the predictive results. Every available means to control air emissions must be employed and incorporated into all remedial actions.

RESPONSE

The Army is committed to taking every precaution to control air emissions that result from remedial actions onpost. However, we feel it is important to recognize that current results from offpost air monitoring stations do not represent baseline offpost conditions and only constitute a temporary condition. Thus, the use of this data to evaluate long-term exposures is not appropriate. Interim responses to control emissions will be conducted during all remedial actions to minimize airborne emissions.

COMMENT_13a

13. The Final Task 39 Technical Plan indicates that certain data would be collected for use in the Offpost Endangerment Assessment. These data are not presented in the draft report and it does not appear that the information was collected as part of the offpost investigation. A separate section on offpost land-use and demography should be included in the final offpost remedial investigation. Information which should be defined, to the extent possible, and factored into the report includes:

   a. Current land-use, water use, biota population, and characterization of human populations (i.e., identification of potentially sensitive subpopulations such as children, pregnant women, infants, and the chronically ill).

RESPONSE

Much of this data was gathered as part of the offpost assessment and is more appropriately included in the Offpost Endangerment Assessment (EA). The specifics of this comment will be addressed in responses to comments on the EA report.

COMMENT 13b

b. Future land-use and water use based on future development of areas east, northeast, north, and northwest of the Rocky Mountain Arsenal. For example, the proposed 96th Street Highway, the proposal to construct E-470, and the proposal to construct a new airport east of RMA will impact on the growth patterns around the RMA. Similarly, the South Adams County Water and Sanitation District ("SACWSD") plans for water needs and water use north, northeast, and northwest of the RMA must be incorporated into the report.

This information is essential in estimating the human populations which will likely be exposed to RMA contamination.

RESPONSE

We agree these factors need to be considered and they have been examined in the EA.

COMMENT 14

14. The Final Task 39 Technical Plan indicates that the Offpost Endangerment Assessment would be available at the same time as the offpost RI report. During the October, 1986, MOA meeting, the Army indicated that the Endangerment Assessment would not be available until the Feasibility Study report is released. The Endangerment Assessment must be made available prior to the Feasibility Study if any party is to have a meaningful opportunity to review and comment on the report.

RESPONSE

The referenced meeting was not an MOA meeting but rather a meeting of the RMA committee pursuant to the RI/FS process document.

Consistent with the Technical Program Plan and the Army's comments at the October 1986 meeting, the EA will be released for comment in conjunction with the FS.

COMMENT 15

15. The Final Task 39 Technical Plan states at page 9-3, section 9.1 that, "Industrial or commercial facilities that routinely use solvents will be identified in specific portions of the study area where anomalous contaminant levels have been observed." It is unclear where this data

was or is to be reported. However, the data are not included in the offpost remedial investigation report.

RESPONSE

Several facilities have been identified in the EPA study area that may have impacted the water quality in the southern portion of the Offpost Operable Unit where solvents have been sporadically detected. A summary of these data will be provided as indicated in our response to comment #2c.

SPECIFIC_COMMENTS

COMMENT

1. Pg. 1-3. The text should include a summary of findings from EPA's RMA Offpost RI/FS for the area south of 80th Avenue and west of RMA.

RESPONSE

See response to comment #2c.

COMMENT

2. Pg. 1-4. The offpost operable unit is not conservative and fails to include the western boundary, an area known to be impacted by contamination migrating off the Arsenal. All identified groundwater contaminant flowpaths from RMA should be included in this report. Therefore, this report should include an evaluation of the contamination migrating off the western boundary of RMA.

RESPONSE

Multiple sources have been documented in the area to the west of RMA and are currently under investigation in connection with the EPA's Second Offpost Operable Unit. As per an Executive Order No. 12580, 52 CFR 2923 (1987), the area is under the jurisdiction of the EPA.

COMMENT

3. Pg. 1-5 and 1-6. The text should include a summary of the problems associated with the boundary systems and a summary of findings from Tasks 25 and 36.

RESPONSE

An introductory statement will be included to discuss the boundary system(s), a reference to Tasks 25 and 36, and a brief summary of the relevant findings. The specific findings of these tasks are provided in the Task 25 and Task 36 reports.

COMMENT

4. Pg. 2-6. Tables 2.1-1 lists monitoring wells 37310, 37319, 37323 and 37365 as alluvial aquifer wells. Figure 2.1-4 states that the same wells are Denver Formation wells. Please modify the report to properly characterize the aquifer monitored by the wells.

RESPONSE

The text will be modified to correct this inconsistency.

COMMENT

5. Pg. 2-16. The analytical data used in this investigation will not be used solely for the RI/FS engineering efforts, as stated. These data also will be used in support of the endangerment assessment. Given the toxicity of certain RMA contaminants, the lowest detection levels should be attained. Therefore, it is inappropriate to use CRLs. The risk of reporting false negatives is the same for the CRL and MDL methodologies (approximately 50%). The analytical methodologies are also of similar difficulty and cost. Therefore, MDL methodology must be used to achieve the lowest detection levels and to assure that the detection levels are lower than the action levels.

RESPONSE

The Army believes that the concentrations below the CRL lie within a range where the uncertainties are too large to justify quantification. Although these highly uncertain results are not sent to the RMA data management system, they are available as raw data to supplement reported results where there may be ambiguities or contradictory results. We believe that the CRL estimates from the USATHAMA procedure are better representations of what will be achieved in long-term programs conducted by contractor laboratories. A more comprehensive discussion of the rationale for using the CRL methodology is provided in the "Development and Evaluation of Analytical Methodologies Used in RMA Soil Investigations" (Ebasco, April 1988).

COMMENT

6. Pg. 2-27. Table 2.4.1 indicates that hydrochloric acid was monitored in a previous air quality monitoring program. The results should be included in the report.

RESPONSE

The intent of Table 2.4-1 was to provide a general understanding of previous air quality monitoring programs that had occurred during a variety of activities at the RMA. As in the case of hydrochloric acid monitoring, air quality samples were collected in 1969 during demilitarization activities. Reporting hydrochloric acid data here does not seem appropriate as activities suspected of generating hydrochloric acid have ceased.

COMMENT

7. Pp. 3-6, 3-17, and 3-46. The Army needs to confirm the existence of the 50 to 100 foot clayshale "buffer zone" which apparently provides hydraulic separation between the Arapahoe and Denver formation aquifer systems. This determination can be made by constructing groundwater monitoring wells into the Arapahoe formation. These wells should be used to monitor the potentiometric surface and water quality of the Arapahoe aquifer.

RESPONSE

The Army does not agree that monitoring wells should be constructed into the Arapahoe Formation to "confirm" the buffer zone. The presence of the buffer zone is well documented and merely confirming its presence does not justify the risk of cross-contamination caused by extensive drilling into the Arapahoe Formation. The Army will continue to monitor existing Arapahoe wells in the Offpost Operable Unit to assess the water quality of this aquifer.

COMMENT

8. Pg. 3-33. Konikow's 180 gpm/mile groundwater recharge estimate from the Burlington Ditch and O'Brian Canal leakage appears to be low. A 1988 field investigation conducted by MKE (the results of which the State has not received) and groundwater modeling work by Harding Lawson Associates, provide more comprehensive and more recent estimates of groundwater flow than the Konikow estimate. The most recent estimates should be used in the offpost remedial investigation.

RESPONSE

We are in agreement with this comment. The Konikow estimate was only used as an approximation early in this section of the report to demonstrate that recharge from the canal is substantial. Morrison-Knudsen's recharge estimates were used for numerical modeling (MKE, 1987). A consistency check has been performed by HLA to address any differences between the RMA regional model in the Offpost Operable Unit and the offpost RI model. This check revealed that the recharge estimates for the irrigation canals used in both models were similar.

COMMENT

9. Pg. 3-39. Denver formation aquifer pumping tests, similar to those conducted at the north boundary, should be conducted along the northwest boundary due to the variability of the hydraulic properties of the Denver formation.

RESPONSE

A substantial data base for the hydraulic properties of the Denver Fm exists at RMA. Although we agree that the hydraulic properties vary substantially across RMA, we believe that the existing data base should be examined before additional pumping tests are conducted. Much of these data are presented in Task 25. If hydraulic test data are available for Denver Fm units onpost that are similar to units encountered along the RMA northwest boundary, then reasonable estimates of hydraulic properties may be attainable from existing data. Also, the water quality of Denver Fm units downgradient of the northwest boundary should be established before extensive hydrologic testing can be justified.

COMMENT

10. Pg. 3-47. The Arapahoe formation is an important source of municipal water supplies for the metro area, yet no Arapahoe observation/monitoring wells exist at RMA. A potentiometric surface map for the Arapahoe formation should be part of this remedial investigation.

RESPONSE

As pointed out in our response to your comments on the Task 39 Technical Plan, we believe the most prudent method of investigating the bedrock aquifers at RMA is to monitor the uppermost aquifers (those most likely to be affected) and proceed downward to adjacent units which do not indicate contamination. We do not believe that arbitrarily installing wells at depths corresponding to the Arapahoe is an effective approach to defining the vertical extent of contamination nor is it warranted given the risk of cross-contamination associated with drilling into the Arapahoe Fm.

COMMENT

11. Pg. 3-48. The report infers that the contamination detected in the Arapahoe formation is due to poorly constructed domestic wells. While this inference may be true, there are insufficient data to conclude that these wells are the only contaminated Arapahoe formation wells or that poor well construction is the only cause of Arapahoe formation contamination. The Arapahoe formation needs to be further investigated to identify all pathways of contamination and to fully define the extent of contamination in this aquifer.

RESPONSE

The Army will continue to monitor private Arapahoe Formation wells in the Offpost Operable Unit. We do believe that the poorly constructed wells mentioned are responsible for the contamination detected in the Arapahoe

Formation. We do not believe that the low levels of DIMP detected warrant the risk of cross-contamination caused by extensive drilling into the Arapahoe Formation. A program to abandon poorly constructed Arapahoe wells in the Offpost Operable Unit will be evaluated as a part of alternatives examined in the FS.

COMMENT

12. Pg. 3-55 and Appendix F. Please explain why the chemical distribution maps for the alluvial aquifer extend only two miles north of the northern RMA boundary. Known contamination for chloride, chlorobenzene, chloroform, DIMP, fluoride, and sulfate extends beyond this limitation. For example, the consumptive use investigation conducted by ESE in December 1984 and January 1985 showed RMA specific contamination extending into sections 1, 2, 35, [illegible], and 26. While all of these sections are in the study area, they are not included in the chemical distribution maps. All chemical distribution maps must define the full lateral extent of contamination.

RESPONSE

Full size chemical distribution maps that incorporate the entire Offpost Operable Unit, have been prepared but were too bulky to incorporate in the RI report. With the exception of DIMP, the maps in the report do show the extent of offpost ground water contamination. To facilitate your review of offpost data, chemical distribution maps which incorporate the entire Offpost Operable Unit are available to CDH upon request.

COMMENT

13. Pg. 3-55 and Appendix F. The chemical distribution maps for chloride and sulfate do not adequately represent the contamination which has migrated off RMA. Page 3-69 provides a background concentration range for chloride of 34-102 mg/l, however the isoconcentration lines on Figures F-38 and F-39 begin at 250 mg/l. Similarly, Page 3-69 provides a background concentration range for sulfate of 43-220 mg/l, however the isoconcentration lines on Figures F-44 and F-45 begin at 250 mg/l. All four of these figures must be replotted using a minimum contour of at least 50 mg/l.

RESPONSE

We are in agreement with the intent of this comment. However, a minimum contour interval of 50 milligrams/liter (mg/l) is not appropriate for sulfate because downgradient concentrations are never less than 50 mg/l. The chemical distribution map for sulfate will be redrafted with a minimum contour interval of 150 mg/l. We believe a minimum contour interval of 50 mg/l will be appropriate for chloride and distribution maps for this analyte will be redrafted accordingly.

COMMENT

14. Pg. 3-59. DIMP has been detected in the area downgradient of the Northwest Boundary Containment System (offpost sections 9 and 10). The historical presence of DIMP has not been discussed in the report. As noted in the general comments, the monitoring well network in the area northwest of the RMA must be improved to better define the northwest plume, including the distribution of DIMP.

RESPONSE

Please see our response to general comment #5.

COMMENT

15. Pg. 3-113. Although the section is entitled "Distribution of Nontarget Analytes", very little information is presented on the location and distribution of nontarget analytes (e.g., caprolactum) and the frequently occurring TICs. For the State to verify the reported objectives and conclusions in this section, the original data base had to be searched because of the vague discussion in the text. A more complete evaluation and analysis should be included in the report. Summary maps and tables should also be presented.

RESPONSE

A summary of frequency of detection for TICS will be added to the text. The TICS were not detected frequently enough offpost to justify distribution mapping. However, the wells from which samples exhibited TICS and the concentration ranges will be included in the frequency of detection table to facilitate evaluation of the data.

COMMENT

16. Pg. 3-126. Please clarify whether the last sentence of the first full paragraph with respect to the extent of DCPD contamination downgradient of the NBCS indicates that additional wells are needed in the downgradient area along 96th Avenue.

RESPONSE

This interpretation is correct. Task 36 identified the need for more alluvial water quality monitoring wells in this area to fully assess the effects of the NBCS on the DCPD plume.

COMMENT

17. Pp. 4-3 and 4-7. The text needs to explain in further detail the DIMP detected in First Creek at station 06ADD and in the South Platte River at station 01CDD given that these stations are located upstream of known RMA contamination sources and that RMA is the sole source of DIMP.

RESPONSE

The pathways for these detections of DIMP are not known. Because both detections are just above the CRL, have not been repeated in subsequent samplings, and were only detected in the first surface water sampling event (12/85), we believe the detections are the result of errors in the field and/or in the laboratory. The Army will continue to monitor these stations to verify that they are anomalous results.

COMMENT

18. Pp. 4-20 and 4-21. It is concluded that groundwater discharges to First Creek during periods of low flow is the primary contaminant pathway to offpost surface water. The State concurs with this finding. However, a more extensive surface water/groundwater monitoring and sampling program is needed to determine the spatial and temporal interaction of groundwater and surface water along First Creek. For example, additional surface water sampling stations should be located between stations 13DCC and 14BDD. The additional stations should be sampled during periods of low flow. Continuous groundwater level recorders should also be installed in wells along First Creek to better define the interaction between groundwater and surface water.

RESPONSE

We are in agreement that additional data are needed along First Creek to more fully characterize ground water/surface water interactions in this area. The Army has recently collected additional surface water samples along First Creek and between the upstream and downstream gages. We are going to conduct additional monitoring under the Comprehensive Monitoring Program (CMP) and are willing to discuss your specific recommendations for this work.

COMMENT

19. Pg. 5-1. (See general comment number 10.)

RESPONSE

See our response to General Comment #10.

COMMENT

20. Pg. 6-1 to 6-10. Offsite monitoring for airborne pollutants must be performed. As the lead agency, the Army has the responsibility to define the extent of contamination in all media, including air. The report should explain why actual offsite monitoring for airborne pollutants has not been performed to date.

RESPONSE

Offsite air monitoring was not conducted during the RI because onsite air monitoring near sources showed low-levels of contaminants. There were no remedial actions at Basin F at the time that the RI was underway and onsite air quality levels at the basin were considered worst-case. Now that remedial actions are underway, emissions are somewhat elevated but we stress that it is important to recognize that these levels are temporary and do not represent a long-term exposure.

COMMENT

21. Pp. 6-1 to 6-10. The specific results of the predictive offpost toxic airborne analysis (i.e., predictive concentrations at the boundaries and the data used for input parameters, such as stability, diffusion and wind speed) must be presented in the report. The conservative assumptions that were made regarding the input parameters should also be documented in the report. The findings of the predictive offpost airborne analysis cannot be accepted in the absence of these data.

RESPONSE

The predictive toxic airborne analysis utilized gaussian dispersion method equations under conservative conditions. Specifically, we assumed that emissions evolved from Basin F migrated to the nearest boundary to the northwest. Under slightly stable conditions, winds at 3 miles per hour were moving from southeast to northwest across Basin F. We assumed no volatilization of airborne contaminants during dispersion. A discussion of the input parameters and assumptions used in dispersion calculations will be added to the RI report.

COMMENT

22. Pg. 6-3. The report states that semi-volatile compounds identified near the boundary of Basin F comprise "low concentrations". The State disagrees. Dieldrin and CMPSO2 have been detected at maximum concentrations of 1.6 ug/m^3 and 1.7 ug/m^3, respectively. These concentrations are relatively high and may present a significant health risk. Even if the conclusion that offpost concentrations are an order of magnitude lower (a conclusion that cannot be substantiated given the lack of documentation), these toxics are impacting offpost air quality.

RESPONSE

The source of these airborne contaminants is currently being remediated by the interim action being conducted at Basin F. We believe that this is the most effective means of mitigating exposure to these airborne contaminants.

COMMENT

23. Pg. 6-3. The results from the Task 18 onpost air investigations have been used to predict the offpost air concentrations. Previously identified problems with the Task 18 investigation affect the onpost results, and therefore the off-post predictions. The two major problems are:

    a. The limited suite of compounds included in the analytic program. Many compounds could have migrated offpost but were not detected because of the limited analyte suite.

    b. Hi-vol monitors were not located in the direction of predominant high wind events. The worst case scenario of wind transport has not been evaluated in the offpost remedial investigation.

RESPONSE

The Task 18 monitoring program addressed these concerns in the "Air Remedial Investigation Final Report." Relative to the various potential airborne contaminants, there were several volatile and semivolatile organics for which certified methods were used to monitor airborne contaminant concentrations. Additionally, if unknown compounds were detected during sampling, attempts were mae to identify these compounds. We do not feel that many compounds could have migrated offpost and not been detected during Task 18 monitoring. During the upcoming CMP, additional air quality monitoring will be conducted at the basins and at the boundaries. If contaminants are identified that had not been observed previously, their impacts to offpost air quality will be evaluated.

Because the intent was to determine the average ambient TSP levels, we did not focus the TSP sampling specifically on downwind conditions. However, TSP samples were collected at all of the RMA boundaries including in the predominant high wind event direction.

COMMENT

24. Pg. 6-10. Without an offpost air monitoring program, it is impossible to conclude that RMA is not a source of airborne contamination for particulates and ozone.

RESPONSE

Particulate levels at RMA were less at the interior of the Arsenal and greater at the boundaries. Sampling results indicate that offpost of RMA contains more significant sources of particulates than sources onpost. As an example, TSP concentrations at the western boundary are higher than concentrations at the interior of the site, especially during the winter when Quebec Street is sanded.

Offpost sampling for ozone will not provide a direct correlation of ozone levels to the Arsenal. Because ozone is related to widespread point and non-point sources, including hydrocarbons and nitrogen oxides from automobile exhaust, gasoline, and oil storage and transfer facilities and industrial paints, solvents, degreasing agents, cleaning fluids, ink, and incompletely burned wood or coal, it would be difficult to draw direct correlation between the RMA and offpost ozone sources.

COMMENT

25. Appendix H, Pg. v. The text is unclear with respect to the relationship between chemical-specific ARARs and the Endangerment Assessment process. The Endangerment Assessment process cannot be used to unilaterally establish action levels where chemical specific ARARs exist. Please clarify.

RESPONSE

The EA will not unilaterally establish action levels irrespective of ARARs. The process set forth in Figure 2-3 of the Technical Program Plan (and the related text) will be followed in order to integrate ARARs into the EA process.

COMMENT

26. Appendix H, Pg. vi. The text should include 5 CCR 1001-2 through 5 CCR 1001-10 as potential air ARARs.

RESPONSE

The State's suggested potential ARARs will be addressed separately.

COMMENT

27. Appendix H, Pg. vi. The text should include the following potential groundwater ARARs:

- Colorado Basic Standards for Groundwater, 5 CCR 1002-8, Section 3.11.0 et seq. (in particular Tables 1, 2, and 3).

- Colorado Basic Standards and Methodologies, 5 CCR 1002-8, Section 3.1.0 et seq. (in particular Section 3.1.11).

RESPONSE

The State's suggested potential ARARs will be addressed separately.

COMMENT

28. Appendix H, Pg. viii. Contrary to the statement in the text, the State has identified promulgated chemical-specific ARARs for RMA on several occasions. In particular, the State identified ARARs on January 6, 1987, March 7, 1987, and most recently on July 18, 1988. The Army has consistently ignored all promulgated State statutes and regulations. This practice is inconsistent with U.S. EPA actions at Colorado CERCLA sites and is not consistent with Section 121(d) of CERCLA. To the extent the State promulgated standards are more stringent than the federal standards, the State standards must be met. Attachment I contains State identified chemical-specific standards (ARARs).

RESPONSE

The State's position concerning potential state ARAR's will be addressed separately.